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AN ESSAY

ON

THE PRINCIPLES

OF

MENTAL HYGIENE.

BY

D. A. GORTON, M.D.

"What should fairly and honestly be weighed is, that mind is the last, the highest, the consummate evolution of nature's development, and that therefore it must be the last, the most complex, and most difficult object of human study."—MAUDSLEY.

"Sana mens in corpore sano."—HORACE.

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TO
W. S. D.,
AS A TOKEN OF RESPECT FOR A MAN
IN WHOM THE LOVE OF TRUTH FOR ITS OWN SAKE
IS A CARDINAL VIRTUE,
THIS VOLUME
IS FAITHFULLY INSCRIBED
BY HIS FRIEND,
THE AUTHOR.

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P R E F A C E.

THIS essay has been prepared with the profound conviction that mind is the most important part of man ; and that the least contribution tending to extend the world's knowledge and appreciation of the relation of mind to nature is of superlative interest to him.

There is a strong conviction in the minds of many in the medical profession, as well as among intelligent lay-people, that there exists an intimate connection—an interdependent relation—between the physical conditions and environments of man and his moral status. The purpose of this essay is to throw some light upon that interesting subject.

The medical profession has been charged with apathy toward this field of physiological inquiry ; and if the charge be just, I am confident that the neglect has arisen not so much from a want of a just appreciation of its importance, as from a disinclination to intrench upon a department of study which the custom of centuries has wrongfully confided exclusively to the profession of theology, and perhaps, also, from a

modest disinclination to needlessly appear in the unpopular rôle of a teacher of heretical views. The time is come, it seems to me, when justice to an intelligent conviction requires such scruples to be laid aside. The cause of human progress demands the consecration of the highest professional endeavor in this regard. Truth is a legacy too precious to mankind to be sacrificed in the interest of conventional usages and set formulas. Whatever be the fate of these, truth must abide forever.

If the sense of security which this faith awakens in me has emboldened plainness of speech in reference to religious dogmas, I beg to say that it has been indulged with a deep respect for religious truth and sentiment; and I am more and more convinced with each new thought and observation that man's great want is *more* religion,—a more substantial growth in the religious graces: faith, hope, charity, honor, honesty, virtue. Mental hygiene comprehends the nurture of these ennobling graces.

In the following pages I have purposely confined myself to general principles, as to write out their application to individual exigencies would swell the bounds to which I had limited myself. The wisdom of this course will be questioned by many practical-minded people; but I have greatly mistaken the mental capacity of the average reader if he, by careful reading of the text and due reflection thereon, be not

able to comprehend the bearing of these principles, and to make such application of them as individual and society's needs require. Development is the grand fact of all nature. It is exhibited in the condensation of the primordial atoms; in chemical affinity and crystallization; in the foliage which drapes the planet; in the flowers and fruits which crown the vegetable kingdom; no less in the countless phenomena of conscious life, and the sublime unfolding of the human brain and mind. What is most needful to be known in respect to it, that *proper conditions are the antecedents indispensable to its highest realization in any department of nature, or realm of matter or of mind.*

If I mistake not, when this fact is duly appreciated it will be a comparatively easy task to ascertain the conditions best suited for each particular unfolding, and to place one's self and one's children in accord therewith. Knowledge—knowledge of ourselves—is the most effectual savior from the evils which afflict mankind.

He who reads the following pages with the attention the importance of the subject demands, cannot fail to remark the number of quotations introduced from the writings of distinguished savants, past and present. To my mind, that is the best feature of my volume. And I cannot bring myself to believe that an apology for the innovation is at all necessary. Had I paraphrased freely, my paragraphs would have

looked—only *looked*—more original. The authors from whom I have quoted, however, write good English as well as good sense; and in bringing their ideas to my support, it seems only just to them that I should use their own superior language, instead of paraphrasing their ideas in the inferior one of my own. Moreover, a vast deal of time and mental labor is saved by pursuing the former course; a desideratum of itself sufficiently important in this busy world to embolden me to strongly commend the practice to others under like circumstances. Our writings would sometimes *appear* to be less original in consequence, it is true. But *appearances* are often deceitful, as all know. I do not say, however, that they are always so when the opposite course is pursued. *Pas du tout!*

Deeply sensible of the shortcomings and imperfections of the volume, but conscious, at the same time, of having done the best I could with the leisure and materials at my command, I submit it to the kind consideration of the profession, and of all others interested in the moral and intellectual progress of man.

D. A. G.

311 CLINTON STREET,
BROOKLYN, N. Y., May, 1873.

THE PRINCIPLES OF MENTAL HYGIENE.

CHAPTER I.

MENTAL INFLUENCE OF PHYSICAL AGENTS.

THE art of preserving the health of the mind comprehends a knowledge of the laws and conditions of sentient beings. These laws and conditions comprise man's relation to the Infinite; and if the study of them has raised hygiene to the rank of a science, the credit must be given to the progress of rational philosophy, the diffusion of which is like the reflection of light in dark places.

The bane of hygiene, like that of religion, has been superstition. Indeed, medical history is, to a great extent, the record of the struggle between rational ideas on the one hand, and blind, unreasoning credulity on the other. In the choice of means and observances for the mental and physical improvement of mankind, the most rational are by no means always the most effective. Faith is still a more ready resource in human affairs than reason; and the day is not yet past, in the progress of either religion or medicine, when the

crudest form of that element has ceased to be a sanitary as well as a religious virtue.

The change which human opinion is undergoing in this respect is, in the highest degree, interesting. In ancient Greece, among the blind, credulous worshippers at the celebrated temple of Æsculapius, when a malady was to be cured, or the ravages of a pestilence stayed, the holy serpents kept at the temple were brought out and displayed among the credulous population of the infected districts. The charm seems to have fulfilled its purpose in a measure, for the serpent is still retained as the emblem of the healing art. The Romans invoked the magic aid of Apollo under similar circumstances, and, it is presumed, with similar success. The practice of Christendom is not altogether dissimilar. Even in our day it is customary, among the devout followers of Christ and the advocates of the mystical doctrines of Saint Paul, to appeal to the former for assistance and support in all serious emergencies, as when an epidemic of cholera, diphtheria, or a drought is threatened, or a prince, or some other important personage, is in danger from an infection of typhus! The philosopher's method, in dealing with these exigencies, comprehends an entirely different conception of the divine order and processes. It comprehends the discovery of the causes of pestilence and other abnormal phenomena, and averts and removes their invasion by a resort to rational means. There is no lack of faith in this method; but it is a faith of a higher order than that exhibited in priestcraft and jugglery. It is a faith founded on a knowledge that the universe is governed by no arbitrary edicts or transitory laws; and that the phenomena of

nature, including those of man's physical and mental organization, proceed entirely from legitimate antecedents.* These antecedents may not always be readily apprehended nor easily removed; but, nevertheless, no well-balanced mind, in the full possession of its faculties, could doubt for an instant their existence, nor hope for redress or exemption from their disturbing influence by frantic appeals to the Supreme Being, no more than to the holy serpents, of which the goddess Hygeia is said to have had charge at Epidaurus.

Mental diseases and derangements do not differ in their essential causes from the more obvious corporeal maladies. An unsightly physical deformity represents so much morbid force, spent in the direction of the least harm to the mental character of the individual. A goitre for example may, and I believe often does,

* "All mundane events are the results of the operation of law. Every movement in the sky, or upon the earth, proclaims to us that the universe is under government."—*Draper's Intellectual Development of Europe*, p. 4.

"To those who have a steady conception of the regularity of events, and have firmly seized the great truth that the actions of men, being guided by their antecedents, are in reality never inconsistent, but, however capricious they may appear, only form part of one vast scheme of universal order, of which we, in the present state of knowledge can barely see the outline. . . . Indeed, the progress of inquiry is becoming so rapid and so earnest, that I entertain little doubt that before another century has elapsed the chain of evidence will be complete; and it will be as rare to find an historian who denies the undeviating regularity of the moral world, as it now is to find a philosopher who denies the regularity of the material world."—*Buckle's History of Civilization in England*, vol. i. p. 31.

"Whether we examine the course of the planets, or the world of the animalcula, to whatever field of physical nature our researches turn, the uniform invariable result of scientific inquiry is to show that even the most apparently irregular and surprising phenomena are governed by natural antecedents, and are all parts of one connected system."—*Lecky's History of European Morals*, vol. i. p. 375.

hold in its cells the condensed essence of a mania; rheumatism may divert a pneumonia; and a tubercular phthisis obviate or subvert an incurable neurosis. This important truth is well known to mental pathologists and physiologists, and yet it is continually misapprehended or disregarded by those whose business and duty it is to appreciate it. Nothing is susceptible of a more easy and complete demonstration than that the mind, no less than the body, is subject to physical laws; and that corporeal and mental maladies may mutually supplement and counteract each other. Eminent scientists have long been of the opinion that the mental processes,—the correlation of ideas and feelings, moral perceptions, etc.,—are phenomenal processes peculiar to the nervous functions.* To that, however, it is quite unnecessary to do more than to allude in this connection. All intelligent people, of every shade of philosophic or theologic belief, are firmly united in the opinion that the brain is the physical organ of the mind,—its seat, residence, and visible source; and that their connection is quite indissoluble during life.†

* "It must be distinctly laid down," says Maudsley, "that mental action is as surely dependent on the nervous structure as the function of the liver confessedly is on the hepatic structure."—*Physiology and Pathology of the Mind*, p. 44.

† "If the growth of the cerebral organs be incomplete, the faculties of the mind are equally defective."—*Spurzheim's Phrenology*, vol. ii. p. 87.

"The possibility of exercising and training the faculties of the mind also shows their dependence on the organization; for that an immaterial being can be exercised is inconceivable."—*Ibid.*, p. 36.

Dr. John Mason Good, whose learning and moral qualities "The Study of Medicine" sufficiently attests, acquiesces blindly and reverently in the revelations of Scripture for light upon all matters psychical and spiritual, confessing his utter ignorance of their nature and essence. "Of the nature of the mind or soul itself," he says, "we know little beyond what revelation has informed us." But we are also equally in the dark concerning the

Like matter and force, the one may be *conceived* as existing separable from the other, but it is only in *conception* after all. In *fact*, the twain are inseparable and indissoluble by any process short of breaking up and destroying the physical organization, by which the psychical is actuated and made known to us. Physiologically, brain and mind are to be considered one and inseparable.*

nature of matter. He says: "Of the essence of matter we know nothing, and altogether as little of many of its more active qualities. . . . But if we know nothing of the essence, and but little of the qualities of matter, of that common substrate which is diffused around us in every direction, and constitutes the whole of the visible world, what can we know of that which is immaterial?"—*Study of Medicine*, vol. ii. pp. 161-2.

At the time our author wrote the whole scientific world was divided into materialists and immaterialists. Since the brilliant discoveries of the later physiologists, and more notably those of the spectroscope, materialistic problems have measurably ceased to disturb the moral equilibrium of any class of thinkers; matter being sufficiently wonderful in its strange metamorphoses to enlist the earnest attention of the most enlightened and spiritually minded.

* "Consciousness gives no account of the essential material conditions which underlie every mental manifestation and determine the character of it: let the function of an individual's optic ganglia be abolished by disease or otherwise, and he would not be conscious that he was blind until experience had convinced him of it. On grounds which will not easily be shaken it is now indeed admitted, that with every display of mental activity there is a correlative change or waste of nervous element; and on the condition of the material substratum must depend the degree and character of the manifested energy or the mental phenomenon."—*Maudsley's Physiology and Pathology of the Mind*, p. 13.

"Magendie, the celebrated French physiologist of the last century, also held that the phenomena of life and mentality were the sequence of vital and nervous functions. Concerning the genesis of mind and intelligence, he says: 'L'intelligence de l'homme se compose de phénomènes tellement différens de tout ce que présente d'ailleurs la nature, qu'on les rapporte à un être particulier qu'on regarde comme une émanation de la Divinité.' And while the physiologist cannot doubt the existence of a Supreme Being, it is well, he thinks, to use guarded language in expressing his relations to him, since that is a subject of which he knows so little. Then he con-

"In dead matter," says Maudsley,* "the form is looked upon as the attribute of the matter; whereas, on the other hand, in living bodies, the matter is treated as the attribute of the form. In inorganic nature the matter is the essential thing; in the organic creation the form is all in all. But to neglect the exact consideration of the conditions and combinations of matter, as determining organic form, is not less mischievous than it is to concentrate all the attention upon the matter in inorganic nature. What are inseparably joined together in nature let us not vainly attempt to put asunder."

"This doctrine of the brain," says Lewes,† "is understood in two different ways by two contending schools. The one regards the brain as the original agent; the other regards it as the intermediate instrument. According to the one, the brain thinks as the stomach digests; according to the other, the brain is the instrument of thought, played upon by the mind as a piano is played upon by a musician. These two schools, however opposed, meet on neutral ground when they come to the laws of physiology. . . . A piano out of tune will yield discordant music, let the performer be ever so skillful. A penny-whistle can never have the clang of a trumpet. It is obvious,

tinues: 'Mais la sévérité de langage ou de logique que comporte maintenant la physiologie, exige que l'on traite de l'intelligence humaine comme si elle était le résultat de l'action d'un organe. . . . Il existe une science dont le but est d'apprendre à raisonner justement, c'est la logique; mais le jugement erroné ou l'esprit faux tiennent à l'organisation. Il est impossible de se changer à cet égard: nous restons tels que la nature nous a faits.'"—*Précis Élémentaire*, from *Good's Study of Medicine*, vol. ii. p. 162.

* *Physiology and Pathology of the Mind*, p. 75.

† *Physiology of Common Life*, vol. ii. p. 13.

therefore, that on the structure and state of the instrument will depend the quality of the sounds produced."

It is curious to observe that the materialistic physiologists and the metaphysical physiologists diverge just at this point. The subject is a legacy bequeathed to medicine by a dead and decaying theology.* The discussion which it has awakened in the profession of medicine resembles the wrangles of the monks of the Middle Ages over such questions as the attributes of Deity, the heat of hell, and the size of the human soul, etc. The result of the discussion has been quite as idle and profitless. It is now generally conceded that matter and force are each inexplicable, and that, in the last analysis, as much is known of one as of the other. To the physiologist it is surely enough to know, what is no longer disputed, and all that can be known, namely, the mutual dependence of matter and force, of brain and mind; and that the principles which preside over the well-being of one are equally operative upon the destiny of the other. "That which perceives," says Dr. Thomas Brown,† "is a part of nature as truly as the objects of perception which act on it, and, as a part of nature, is itself an object of investigation purely physical." And Dr. Haven admits

* "The habit of viewing mind as an intangible entity, or incorporeal essence, which science inherited from theology, prevented men from subjecting its phenomena to the same method of investigation as other natural phenomena."—*Maudsley's Gulstonian Lectures on Body and Mind*, p. 12.

† Philosophy of the Human Mind. This comprehensive idea of nature is the revival of a very old doctrine. The earliest Greek conception of *nature* included the objective world, simply—earth, fire, water, and an active principle, or force—air. "Afterward," says Maine, "the later Greek sects, returning to a path from which the greatest intellects of Greece had meanwhile strayed, added the *moral* to the *physical* world in the conception of nature. They extended the term till it embraced not merely the visible

substantially the same doctrine. "The human mind," says he, "is strictly a part, and a most important part, of *nature*, unless we exclude man himself from the world to which he belongs, and of which he is lord."*

It may be still further observed, in passing, that from the habit of ignoring mental hygiene, by both classes of physiologists, or of giving the subject but an insignificant treatment in the study of the laws of health, and leaving to theology what it is the clear province of medicine to accomplish, has arisen the custom, by no means extinct, of observing and studying mental disorders from the purely metaphysical or subjective point of view. It has been usually assumed, by the dominant school, and tacitly admitted by the other, that mind, in the abstract, is a spiritual entity, or an "incorporeal essence," separable from the body, as force is conceived by many to be separable from matter, and independent of the recognized laws of vitality. Little attempt has been made, until modern times, to analyze its nature from a physiological stand-point, or to reduce its phenomena to a strictly scientific basis of objective observation. The physical side of mentality has been, for the most part, if not wholly, confined to a description of the brain and nervous system, and the part they play in the corporeal system; the

creation, but the thoughts, observances, and aspirations of mankind."—*Ancient Law*, p. 51.

Nature comprehends all things within the ken of human reason and observation. "Not the smallest atom," says Maudsley, "that floats in the sunbeam, nor the minutest molecule that vibrates within the microcosm of an organic cell, but is bound as a part of the mysterious whole in an inextricable harmony with the laws by which planets move in their appointed orbits, or with the laws which govern the marvelous creations of godlike genius."—*Maudsley's Physiology and Pathology of the Mind*, p. 26.

* *Mental Science*, p. 16.

influence of light, sleep, rest, exercise, and recreation on its functions: nothing more. Books of hygiene may be consulted in vain for definite information respecting the precise influence of morbid causes and agents on the mind, or of rational means of restoring and preserving the health of a mind disordered by them, especially if the phenomena presented be removed from the ordinary plane of physical observation. Surely, if mind be the most important part of man, as Sir William Hamilton and the philosophers of his type were pleased to believe, this is a grave neglect. A system of hygiene, or of moral philosophy, which does not recognize the superior excellence of man's nervous organization; which appreciates not the grand distinction and superiority of his mentality over that of other animals; which, in short, fails to recognize his grand spirituality, and to perceive the wide chasm which separates him from all other orders of beings in nature, must obviously be defective. The works on physiology and hygiene, of which there are many admirable in their way, apply almost equally well to man as an animal, or to an animal as man. The higher functions of the nervous system, comprehending the religious element, and the influence of physical causes upon its manifestations, are but slightly and incidentally touched upon. Studies in mental hygiene and therapeutics should remedy this obvious deficiency; and a few writers have lately been bold enough to risk the charge of heresy in opening the discussion.* Among the most

* If mind be a part of nature, and held in subjection to her laws, it is natural to conclude, what indeed is fully demonstrated by the facts of

prominent works which have taken advanced views on the subject is Mr. Graham's "Science of Human Life," an able book, but little read, owing to the unpopularity of its author's well-known views of dietetics. "The Constitution of Man," by George Combe, tends in the same direction. "The Principles of Physiology," by Dr. Andrew Combe, is also an exception, in this respect, to the usual works on hygiene; and Dr. Ray's "Mental Hygiene" is an admirable monograph, fulfilling, in many respects, the just re-

mental physiology and pathology, viz., that there is an intimate connection between morbid causes and mental disease; between, in other words, sin and sickness, immorality and morbid anatomy. Those who read attentively the records of criminal trials cannot fail to have been impressed with the frequency with which disease and crime are associated together in the same person. So constant is this phenomenon in our law-courts, that the defense have no difficulty in getting well-informed experts to testify in support of the plea of insanity on the part of the culprit. The fact is urged by the unthinking public as an evidence of the unreliability of medical evidence in such cases. It should rather be regarded as evidence of the intimate connection subsisting between crime and disease, for which doctors and criminal counsel are, in most cases, assuredly *not* responsible.

These facts, in connection with the psychical influence of morbid and drug agents, point unmistakably to the ultimate establishment of a science of moral therapeutics and pathology. Mr. Lecky, the able author of the "History of European Morals," has already anticipated such a result. He says:—

"He who raises moral pathology to a science, expanding, systematizing, and applying many fragmentary observations that have already been made, will probably take a high place among the master intellects of mankind. The fastings and broodings of the mediæval monk, the medicines for allaying or stimulating the sexual passions, the treatment of nervous diseases, the moral influences of insanity and castration, the researches of phrenology, the moral changes that accompany the successive stages of physical development, the instances of diseases which have altered, sometimes permanently, the whole complexion of the character, and have acted through the character upon all the intellectual judgments, are examples of the kind of facts with which such a science would deal."—*History of European Morals*, vol. i. p. 167.

quirements of the subject. In conjunction with Maudsley's* and Winslow's† able contributions to mental physiology, the subject of mental hygiene becomes tolerably comprehensible to those at least whose minds are free from the unhappy bias of theological tradition, and the fallacious doctrines of the earlier physiologists.

It should be borne in mind that man is a physiological unit. Divide his organization into as many parts as we may, his individuality comprehends them all; and the loss of the most inconsequential part destroys his identity. In him the animal and the human harmoniously blend. The higher attributes of a human being, the cerebrum, may be destroyed, and yet the animal part of his organization preserve its vital integrity. This fact is illustrated in idiocy and imbecility. Moreover, M. Flourens and others have actually removed the cerebra of birds and other animals without impairing the functions of the lower animal life. The animal part of man is thus observed to be, in a measure, independent of the human, and may maintain a separate existence. The characteristically human part of his organization, however, is not thus independent of the animal organs, but is united to them by an inseparable bond. The cerebrum is the flower of organic creation,—its supreme coronation. Its vital integrity is maintained by the corporeal system. The radicle may live and flourish independent of the flower; but if the flower be disconnected from the radicle, it speedily withers and dies. So is it with the

* Physiology and Pathology of the Mind.

† Obscure Diseases of the Mind.

human mind : its health and integrity are inseparable from a sound body ; and it may be seriously questioned if mind in any form or condition is ever separable in terrestrial life from the material casement of the nervous system. Mental hygiene necessarily comprehends the laws and conditions of man's whole being, physical and mental, one and inseparable. In respect to the corporeal or animal life, let us premise that its laws and conditions are well known and appreciated, and proceed to the consideration of those of the more complex and characteristically mental and human.

The brain and nervous system may, in one respect, be compared to the sensitive plate in the camera, registering faithfully all the various and conflicting impressions received from without ; but, unlike the camera, receiving and registering likewise all those from within.* The brain is the centre of the individual universe. Through the reflex action of the nerves, and vascular circulation, the various diseased states of the body are duly, it may be said unceasingly, recorded upon it, modifying its function, and interrupting, more or less seriously, the orderly flow and sequence of ideas. Thus it is impossible for a disease, however slight or inconsequential, to exist in the most

* Dr. Combe, whose able work on physiology and hygiene I have before alluded to, after admitting the existence in the brain of a distinct mental essence,—mind in the abstract,—declares : " It requires, however, to be distinctly understood that activity of mind and activity of brain are not only inseparable, but that so long as life remains the mental operations are distinctly influenced by the condition of the brain." And again : " The brain being a part of the animal system and subject to the same general laws as the other organs, the reader will not be surprised that I should, as in the case of the lungs, state a sound original constitution as the first condition of its healthy activity."—*The Principles of Physiology*, p. 216.

remote extremity of the body without making itself morbidly manifest in the brain. The mental effect of a mechanical injury, as a cut or a bruise, with a knife or other instrument; the shock coincident with a blow or a fall, the dislocation of a joint, or the fracture of a limb; or a slight loss of blood or other humors of the body,—are frequently similar to those produced on the mind by excessive fear, intense anxiety or grief, or other powerful emotions. The sight of blood causes fainting in some persons; and I have known strong men to sink into complete coma by an unimportant cut of a finger, or from the pain of an old tooth, or the suffering attending its extraction, and even by the sympathy with the trifling pangs incident to that operation in others. Indeed, the mutual sympathy and reciprocity between mind and body are so intimate and strong, that it is impossible to conceive of the affection of one without the other being morbidly disturbed by that affection. “Experience, our only sure guide in medical inquiries,” says Forbes Winslow,* “instructs the physician that a diseased condition of the body produces an alteration in the condition of the mind; and that certain emotions of the soul, whether of a pleasurable or painful nature, are universally attended with reciprocal alterations in the bodily functions.”† Every thought, no less every muscular act,

* *Body and Mind*, p. 153.

† “All mental excitements, therefore, are causes of some degree of disturbance to the nerves of organic life; and when violent and frequently repeated, they necessarily induce and permanently establish a morbid irritability and sympathy throughout the whole domain, generally involving, also, the brain and spinal marrow, and especially the brain. Functional aberration and derangement necessarily result from this state of things, leading to disease and change of structure in the organs. On the other

is attended with consentaneous changes in the nervous structure; and there is reason to believe that the nature of those changes is modified according to the character or quality of the thoughts and emotions excited. The exercise of agreeable emotions and ideas is highly salutary on the general health and circulation; while painful emotions are well known not only to destroy the physiological poise and equilibrium, but to actually poison the blood and secretions as effectually as the absorption of malaria or medicinal and toxical agents. This may be effected in part, it is true, from arrest or modification of the functions of the excretory organs; but that it cannot result wholly from that cause seems to be demonstrated by the fact that the exercise of different morbid emotions produces different derangements of the secretions. The milk, for example, of an angered mother sickens her child; but it is not known that the effect of grief produces a similar morbid effect upon her milk.

Be that as it may, that field of medical inquiry is an

hand, the mind sympathizes in the most delicate and powerful manner with the nerves of organic life in all their general affections and conditions."—*Graham's Science of Human Life*, secs. 304, 305.

Long ago Descartes observed: "That the soul is so much influenced by the constitution of our bodily organs, that if it were possible to find out a method of increasing our penetration, it should certainly be sought for in medicine."—*Quoted from Winslow's Body and Mind*, p. 153.

Dr. Combe, although an adherent of the metaphysical school of philosophy, frequently lapses to the physiological. "A good deal of observation," he observes, "has convinced me that the transmission of imperfectly oxygenated blood to the brain is greatly more influential in the production of nervous disease and delicacy of constitution than is commonly imagined."—*The Principles of Physiology*, p. 220. It is impossible to be oblivious to the fact that the blood deranged from other causes may be equally or even more vicious and vitiating in its influence on the mind.

interesting one, and requires a stronger hand than mine to work it profitably. Moreover, its cultivation is outside the limits of my present task, which is confined to subjects more easily demonstrable.

Dr. Johnson facetiously observes, that "every man is a rascal as soon as he is sick." Whether he designed the remark to be taken in its literal sense or not, there is certainly an immense amount of literal truth in it. The modification of the morals, passions, and intellect is most marked in a variety of physical derangements, as all who have been ill even to an inconsiderable degree can attest. Aside from actual mental aberration, consequent on many disorders of the corporeal organs, ill humor and nervous irritability may be induced by very slight disturbances of the general health, as a cold in the head, disordered stomach, privation of sleep, etc. Thus it is that peculiarities of climate, sudden atmospheric changes, and unwholesome, vitiated air, exercise an important influence upon the mental functions, as well as upon bodily disease. Abodes in dark, overheated, ill-ventilated apartments, where the air is confined, and in consequence loaded with the effete débris and noxious vapors necessarily incident to organic life, are prolific of manifold derangements. The blood becomes poisoned, and through it the fountain of thought and feeling is correspondingly corrupted. In a small way these vitiating causes and consequences may be observed in the homes of the indigent poor in any large city. Poor air, unwholesome food, ill health, vice, poverty, and crime go hand in hand, and are mutual concomitants of each other. On a larger scale, the moral influences of unwholesome climates and conditions are illustrated in the lives of

various peoples and nations. The characteristically stimulating climate of the United States induces nervous restlessness, mental activity, desire for stimulants, and a tendency to suicidal mania. The climate of the whole Atlantic coast is particularly irritating and unfavorable to long life and good morals. Nor is this atmospheric condition alone peculiar to the United States. It is said by Dr. Ray,* that "during the prevalence of the sirocco wind in Malta, Sicily, and the south of Italy, there is observed to be a great increase of irritability and excitement, and nervous disease is more readily developed where the predisposition exist. The damp winds of La Plata produce a general lassitude and relaxation, accompanied by remarkable irritability and ill humor. It is a common thing for men among the better classes to shut themselves up in their houses during its continuance, and lay aside all business until it has passed; while among the lower classes cases of quarreling and bloodshed are more frequent."

Moreover, nothing is susceptible of an easier demonstration than that the love of intoxicating drinks is largely influenced by climatic and atmospheric conditions. Drunkenness is almost unknown among the dusky inhabitants of equatorial regions; while the vice advances with an ever increasing ratio as we approach the more northern latitudes. The love of stimulants is not uncommon to man in all latitudes and under all circumstances; but it requires the colder regions of the north to develop that love into a passion, and to convert the innocent jollity of a southern and eastern savage into a wild and brutal Saxon

* Mental Hygiene, p. 90.

of North America. America is peculiarly prolific of the vice of intoxication. The quiet and ease-loving inhabitant of Europe, although an habitual drinker, falls readily into the gravest habits of intoxication upon emigrating to the western continent. Mr. John Jay, our minister to Austria, says that he has observed more drunkenness in a single day in New York than in a whole year in Vienna.* Yet the use of alcoholic and fermented beverages is more general in the Austrian capital and dominions than it is in New York and America.

Statistics of crime, moreover, prove that the morals of mankind are influenced in no small degree by the succession of the seasons, as well as by sudden meteorological changes of the atmosphere. Causes that heat the blood and depress the pulse and physical energies inflame the passions and lower the tone of the moral energies. Disease and crime are, accordingly, more prevalent in torrid climates, and in the hot seasons of temperate climates; and it is impossible to estimate the measure of one's responsibility for his acts, or to determine with precision how much of our benevolence and kindly intent are the result of cheerful moral surroundings, good digestion, and favorable wind and sunshine, and how much of one's badness and cheerlessness to attribute to the opposite physical and meteorological conditions. It is certainly true that very good people sometimes find it exceedingly difficult to fulfil the just requirements of an enlightened conscience, or even to restrain impulses peculiar to a

* Letter to Professor H. J. Bowditch, Boston, Mass. *Vide* Second Annual Report of the State (Mass.) Board of Health on the Subject of Intemperance. Boston, 1872.

decidedly vicious nature; and that very bad people experience no difficulty sometimes in being good and well-behaved, and both from causes inexplicable to themselves, and least of all deserving either praise or blame. On this subject Forbes Winslow forcibly remarks:—

“In some conditions of nervous disorder the slightest meteorological changes give rise to singular alternations of despondency, despair, hope and joy, so completely does the mind succumb to physical influences. I have known a person subject to attacks of suicidal melancholia during the prevalence of a cold, blighting, depressing east wind, who appeared happy, contented, and free from all desire to injure himself, under other and more congenial conditions of the atmosphere! An Italian artist never could reside a winter in England without the distressing idea of self-destruction suggesting itself to his morbidly-depressed mind. I have known natives of France, accustomed, from early life, to the buoyant air and bright azure sky of that country, sink into profound states of mental despondency if compelled to reside many weeks in London during the earlier portion of the winter season.”*

Our author proceeds to relate a case of a gentleman “suffering from severe mental dejection,” who was painfully depressed when the sky was overcast with black clouds, and cheered and comforted by the glory of the returning sunshine. I have myself repeatedly observed similar effects from clouds and sunshine upon such invalids; and a patient of that class now under advisement finds it exceedingly uncomfortable

* *Obscure Diseases of the Brain*, p. 165.

to occupy a shaded room, or a room with a northern exposure; and another is always gloomy and disconsolate on rainy days, and buoyant and happy when the air is clear and sunny. Hypochondriacal people, in general, are deeply influenced by the weather, and especially require a maximum of balmy air and sunlight. The poet Cowper bears testimony to this truth in his own unhappy experience. In one of his letters to a friend, he says: "I rise cheerless and distressed, and brighten as the sun goes on." Such are some of the effects of external, atmospheric conditions upon the nervous functions of man.

Emerson finds confirmation of these facts in the promptings of his own intuition. In one of his best essays he says: "When our higher faculties are in activity we are domesticated, and awkwardness and discomfort give place to natural and agreeable movements. It is noticed that the consideration of the great periods and spaces of astronomy induces a dignity of mind and an indifference to death. The influence of fine scenery, the presence of mountains, appeases our irritations and elevates our friendships. Even a high dome, and the expansive interior of a cathedral, have a sensible effect on our manners. I have heard that stiff people lose something of their awkwardness under high ceilings and in spacious halls. I think sculpture and painting have an effect to teach these manners and abolish hurry."*

The influence of climate, seasons, sanitary conditions, and certain drugs and morbid agents, upon the more purely animal functions has long been under-

* The Conduct of Life, p. 138.

stood, in a general way, by physicians and socialistic philosophers. The effects of the same agents and influences upon the mind, however, have not received, until more recently, any considerable degree of attention, for the reason, as has been already stated, that its phenomena were considered to be independent of the laws of nature and sense, derived, in fact, from a source above the realm of finite comprehension, and which it would indeed be the grossest presumption for cold, irreverent reason to enter, in an attempt to pry into its sacred secrets. The interesting studies of MM. Quetelet,* Guerry,† Esquirol,‡ and others, early in the present century, concerning the mental influence of climate, seasons, social conditions, etc., opened a new field for reflection and observation. In the preface to his remarkable work, the "Science of Man," first published in Paris in 1835, M. Quetelet boldly affirmed that society was responsible, in a measure, for the crimes of the individual, by affording the "facilities for their development." "It is the social state," he says, "in some measure, which prepares these crimes, and the criminal is merely the instrument to execute them."§ If this doctrine were heretical then, it has ceased to be regarded as wholly so now; for the intimate relation of crimes and diseases—diseases which the progress of sanitary science has demonstrated, in every civilized community upon the planet, to be within the control of civilized society—is a fact of common observation. He must, indeed, have a crude

* Sur l'Homme, et le Développement des Facultés. Paris, 1835.

† Essai sur la Statistique Morale de la France, 1830.

‡ Annales d'Hygiène—Remarques sur la Statistique des Aliénés, 1830.

§ Preface to the English translation, page 6. Edinburgh, 1842.

sense of justice, who supposes that the individual acts committed against the peace and order of society are to be attributed alone to the criminal, when the merest novice in philosophy can demonstrate that that very criminal is to a great extent a creature of conditions and environments, of antecedents which he did not make and could not control; that, in fact, he himself is sinned against as well as sinning, and has just cause of grievance against society for permitting the existence of conditions which breed in him ill health and morbid impulses without end, and then turning upon him the avenging hand of remorseless law! The criminal has as clear a case against a community which permits the existence of avoidable causes of disease and crime as the man who falls into an unguarded pit in the public highway has against the city or village corporation where the incident occurs, or as the victim of a railroad accident has against the criminal carelessness of its managers. The cases are clearly analogous, as I apprehend them; but society does not, unhappily, yet appreciate the analogy which makes her a party to such grave responsibilities. She is slow in discerning relations not apparent upon the surface; and while she exercises good sense with railroad companies and other incorporated bodies in holding them responsible for the lives and limbs of their patrons, imposing heavy fines for the consequences of their neglect of duty, she has Bibles and tracts, handcuffs and hemp, for those whom *her* wrongs have too often goaded into making retaliatory reprisals upon individuals: I say retaliatory reprisals advisedly, for this is the view most intelligent criminals take of the matter.

The difficulties environing this subject arise from the failure to correctly apprehend the operation of moral causes, and the just relation of the individual to society. The justice of holding corporations responsible for the evils growing out of manifest neglect in the performance of their functions is universally recognized, except by the corporations themselves; the propriety of making corporate communities answerable to the individual for the consequences of infectious and pestilential diseases was long since openly advanced in high places.* But it remains for the modern mind to discern that moral disorders have also their avoidable causes, which are as fixed in their laws of operation as are the more obvious physical laws; and that the community which neglects their observation and enforcement shares with the culprit the guilt of murder, theft, and other crimes which occur in consequence of such neglect, in the same way, precisely, as if the evil had been a Westfield explosion, a Car-Rock disaster, or an influx of cholera or typhus.†

* "To every evil the Author of nature has kindly prepared an antidote. Pestilential fevers furnish no exception to this remark. The means of preventing them are as much under the power of human reason and industry as the means of preventing the evils of lightning or common fire. I am so satisfied of the truth of this opinion, that I look for the time when our courts of law shall punish cities and villages for permitting any of the sources of bilious and malignant fevers to exist within their jurisdiction."—*Dr. Benjamin Rush*.

† "It is absurd to suppose that the crimes in great cities are attributable altogether to the free agency of the poor wretches who are transported or hung for them. The nation which can and does not prevent the existence of a criminal class is responsible collectively for the evil done by this class. This we can see plainly enough, although the exact distribution of the responsibility among the different members of society may be impossible to determine."—*E. B. Taylor, in the Nation, 1872*.

Objection is urged against these views that they are opposed to the dogmas of free will and human accountability. They do, certainly, restrict *individual* accountability, and subordinate human volition to moral and physical laws. But what the individual loses in this respect is put upon the shoulders of society; so that in the end MAN—the average man of Quetelet—is relieved of no burden or responsibility, but, on the contrary, is held more justly and properly responsible for all his acts, neglects, and their attendant consequences; while it frees an inscrutable Providence from the odium unjustly charged to him by an inscrutable blindness, of causing the more obscure evils that afflict the social state. If it be sacrilege to advocate truths and principles inconsistent with the stability of theological dogmas, it is impious to impute to Providence those countless crimes and casualties which occur outside the confines of a narrow and antiquated philosophy.

It is foreign to the purpose of an essay of this kind, however, to enter upon an extended discussion concerning the bearings of the principles herein advocated, or of the numerous facts adduced in their support. M. Quetelet, in the volume referred to, has collated in a tabular form many facts from the writings of Esquirol and others, which serve to show in clearer light than argument can do the regularity of moral phenomena under the joint operation of moral and physical laws, and man's complete subordination to his environments. We have already referred to the remarkable influence which is exercised by seasons and climate upon the mental state. The following table from Esquirol shows the influence of the seasons upon

mental alienation among both sexes, in France, at Charenton:*

Influence of the Seasons upon Insanity.

MONTHS.	ADMISSIONS, 1828-1829.		ADMIS- SIONS BE- FORE 1829.	CURES.	DEATHS.
	Men.	Women.			
January . .	42	21	37	11	21
February . .	40	33	49	10	24
March . .	49	25	53	10	16
April . .	50	38	58	16	22
May . .	58	36	44	15	18
June . .	55	34	70	19	18
July . .	52	36	61	23	18
August . .	45	24	64	22	13
September . .	48	26	47	22	11
October . .	44	47	49	24	30
November . .	47	22	35	22	22
December . .	35	28	52	15	8
Total . .	565	370	619	209	221

It will be observed, according to this table, that insanity is evidently more rife in hot weather, and that its decline in the season of autumn is quite in accord with what one would suppose to be natural, with the decline of the apparent exciting cause,—excessive heat.

The same author shows, also, the connection of age with the same disease. It would not appear, however, that any attempt was made to discriminate in the table between the differing types and varieties of insanity.

* Quetelet's Science of Man, p. 76.

Influence of Age upon Insanity.

AGES.	AT CHARENTON, before 1829.		RATIO.	LUNATICS TO THE POPULATION.	AT CHARENTON, 1829 to 1833.	
	Admis- sions.	Cures.			Men.	Women.
15 to 20 years . . .	22	11	2.0	24	24	11
20 to 25 " . . .	67	30	2.2	79	65	23
25 to 30 " . . .	86	40	2.2	109	78	31
30 to 35 " . . .	98	36	2.7	134	79	47
35 to 40 " . . .	81	25	3.3	125	65	64
40 to 45 " . . .	79	21	3.8	129	64	59
45 to 50 " . . .	72	14	5.1	131	52	44
50 to 55 " . . .	52	12	4.3	108	54	37
55 to 60 " . . .	21	6	3.5	51	32	20
60 to 65 " . . .	21	9	2.3	63	33	18
65 to 70 " . . .	6	1	6.0	24	14	9
70 and upwards. .	14	4	3.5	45	6	7

This table is highly instructive, particularly in showing the bearings of age upon the disease in question, and the comparative predisposition of the sexes to mental derangements. Man is more subject to the disease in early manhood, at the period of his greatest intellectual activity. Its greatest activity in woman, on the other hand, is the period preceding the change of life. Men at all ages, particularly that of youth, are more subject to it than women, except in the very evening of life, when women exceed them in liability. It was this fact, constant in the phenomena of madness, of the greater liability to attacks of the disease during the period of the greatest intellectual activity, that led M. Esquirol to declare insanity to be a disease of civilization.

The following table illustrates more forcibly the comparative liability of the sexes to the disease: it is also from Esquirol:

Comparative Liability of the Sexes to Insanity.

AGES.	PARIS.			NORWAY.		
	Men.	Women.	Total.	Women.	Men.	Total.
Before 20 years . .	436	348	784	141	188	329
From 20 to 25 . .	624	563	1,187	83	101	184
" 25 to 30 . .	635	727	1,362	88	97	185
" 30 to 40 . .	1441	1607	3,048	173	214	387
" 40 to 50 . .	1298	1479	2,777	155	150	305
" 50 to 60 . .	847	954	1,801	115	128	243
" 60 and upwards	875	1035	1,910	140	117	257
Total	6156	6713	12,869	895	995	1890

Then again, in the morbid phenomenon, mental, of suicide, may be observed the evidence of man's moral subjection to physical environments. M. Caspar has attentively studied the subject of suicide as it is affected by climate, age, sex, etc. Suicide, according to the researches of that author, is far more prevalent among men than women; in cities and large towns than in the rural districts; in summer than in the cooler months. It is rare in childhood; has a period of exacerbation in early manhood; of decline at the prime of life; another period of exacerbation from the ages of fifty to sixty, and another period of decline toward the evening of life. The table below shows, in various localities, the

Influence of the Seasons upon Suicide.

MONTHS.	BERLIN. 1812-1822.	HAMBURG. 1816-1822.	WEST- MINSTER. 1812-1821.	PARIS. SIX YEARS.
Jan., Feb., and March.	109	39	67	42
April, May, and June .	155	31	55	58
July, Aug., and Sept. .	173	41	60	61
Oct., Nov., and Dec. .	145	38	46	31

The following table, showing the influences contingent upon the different epochs of life and their relation to suicide, is made up by M. Quetelet from the works of MM. Caspar, at Berlin, and Beitrage, at Geneva:*

Suicide and Age.

AGES.	BERLIN. 1818-1824.	GENEVA. 1820-1826.
Below 10 years	1	5
From 10 to 15 years	17	
" 15 to 20 "	32	
" 20 to 25 "	30	24
" 25 to 30 "	25	
" 30 to 35 "	12	
" 35 to 40 "	9	45
" 40 to 50 "	34	
" 50 to 60 "	32	
" 60 to 70 "	17	21
" 70 to 80 "	9	
80 and upwards	2	
Total	220	95

Influence of Knowledge upon Crime.—The intimate relation which subsists between ignorance and crime has already been referred to. It is too obvious in the present state of our knowledge to require facts and argument, that as man rises in the scale of being and more fully appreciates his higher relations to the divine, the further removed is he from the dominion of the wayward impulses of his lower nature.

The demand which is at the present time heard, from all the great centres of modern civilization, is, in view of this new-born conviction, for compulsory

* Quetelet's Science of Man, p. 81.

education ; for it is manifestly more economical to the state to provide free schools for children than almshouses, jails, and penitentiaries for grown-up beggars and ignorant and lawless poor. The acceptance of this view of the relation of ignorance and immorality marks an era in the world's mental progress ; and yet it is but a single step on the part of society towards a just appreciation of her obligation to provide for the moral welfare of her members. It is her duty, as we have observed, to protect the individual, as she only can do, in his condition of dependent helplessness, from all those agents and influences of demoralization, as defective generation, (ante-natal,) foul air, impure water, and unwholesome food, dark, unclean, over-crowded, and unventilated abodes, pestilence, the vicissitudes of the seasons, ignorance of the laws of his surroundings, both moral and physical, etc. These conditions are all, every one, indispensable to good morals, no less than to good health, but such as the individual by himself, unaided, could never achieve, and which only society can and ought to secure to him. I may be pardoned, perhaps, for insisting upon the necessity of proper conditions as antecedent to wholesome moral and physical progress.

In doing so it is unnecessary, I hope, for me to disclaim any desire to speak in derogation of religious influences, except only to the extent which the exigencies of the occasion and the interest of truth require. When reading Mr. Mayhew's voluminous work on "The London Poor" some time since,* I was forcibly impressed with the statement that "the great need of

* Preface. Published in 1852.

the London poor is the word of God." When one reflects upon that statement, in full view of the fact that hundreds of thousands of London poor occupied underground apartments and sub-cellar kennels unfit for animals above the order that crawl, over-crowded at that, without light and ventilation; scantily supplied with water of miserable quality, with absolutely no means of cleansing either body or the scanty supply of rags upon their backs; eating, for the most part, the refuse of kitchens, understocked at best; having nothing to read, and unable to read even what they had; the word of God given under such circumstances seems to me like adding insult to injury. Misplaced good is positive evil. To throw Bibles before such squalid wretchedness, is not pitching pearls before swine, but it is mocking the hungry and impoverished with crude, inappropriate, and indigestible matter. It is giving pearls for food; baptism for baths; piety for pure air; the light of Revelation for the light of heaven. When religion indulges such incongruity it merits contempt rather than respect. It is faith without works, with the usual result. Good intentions there may be; but good intentions to be fruitful must have wise adaptation. Hell is said to be paved with good intentions!

On the next page we submit some figures from Quetelet, compiled from the Belgian prisons, which may serve to elucidate the relation of ignorance and crime.

*The Relation of Ignorance and Crime.**

INTELLECTUAL STATE OF THE ACCUSED.	ABSOLUTE NUMBER.			RELATIVE NUMBER.		
	Accused in France.		Condemned in Belgium, 1833.	Accused in France.		Condemned in Belgium, 1833.
	1828-29.	1830-31.		1828-29.	1830-31.	
Could not read or write . . .	8,689	8,919	1,972	61	61	19
Could read and write imper- fectly . . .	3,805	3,873	472	27	27	15
Could read and write well . . .	1,509	1,455	776	10	10	24
Had received a superior edu- cation to the 1st degree . . .	286	319		2	2	
Total . . .	14,289	14,566	3220	100	100	100

According to these data, while the diffusion of knowledge would not wholly depopulate the prisons, it would reduce the number confined in them to a minimum of their present population. Below I append a table from the same learned author, giving the ratio of sex to crime under similar conditions and influences. The table is highly creditable to the moral superiority of woman; but it shows also, as M. Quetelet says, "how much influence our habits and social position have on crime."†

* Quetelet's Science of Man, p. 85.

† Ibid., p. 92.

Comparative View of the Relation of Ignorance and Crime to Sex.

INTELLECTUAL STATE.	Men.	Women.	Ratio 1828-29.	Men.	Women.	Ratio 1830-31.
Unable to read or write . . . }	6,537	2152	3.0	6,877	2042	3.3
Able to read and write imperfectly . . . }	3,308	497	6.6	3,422	451	7.6
Could read and write well . }	1,399	110	12.7	1,373	82	16.7
Had received an excellent education to the 1st degree . . }	283	5	56.6	314	5	62.8
Intellectual state not mentioned. }	374	104	3.6	2		
	11,901	2868	4.2	11,988	2580	4.6

The Influence of the Seasons upon Crime.—I have treated this subject at some length in another part of this chapter; but before taking final leave of a most interesting subject, I cannot forbear to add a tabular argument upon it. It will be observed that there is a close analogy between the causes which influence suicides and mania and those which exert a marked influence upon crime. To my mind the coincidence is sufficiently striking to identify them in the same category of causes of morbid psychology. The table which is found on the following page has been compiled from the "Comptes Généraux de la Justice."

Influence of the Seasons upon Crime.

MONTHS.	CRIMES AGAINST.		RATIO 1827-28.	CRIMES AGAINST.		RATIO 1830-31.
	Persons.	Prop- erty.		Persons.	Prop- erty.	
January . .	282	1,095	3.89	189	666	3.52
February . .	272	910	3.35	194	563	2.90
March . .	335	968	2.89	205	602	2.94
April . .	314	841	2.68	197	548	2.78
May . .	381	844	2.22	213	569	2.67
June . .	414	850	2.05	208	602	2.90
July . .	379	828	2.18	188	501	2.66
August . .	382	934	2.44	247	596	2.41
September . .	355	896	2.52	176	584	3.32
October . .	285	926	3.25	207	586	2.83
November . .	301	961	3.20	223	651	2.95
December . .	347	1,152	3.33	181	691	3.82
Total . .	3847	11,205	2.77	2428	7159	2.94

M. Quetelet, in whose able work, before quoted, I find the table, remarks the coincidences above alluded to. He writes: "We can also compare the numbers of this table with those which I have given to show the influence of seasons on the development of alienation, and we shall find the most remarkable coincidences, especially for crimes against persons, which would appear to be most usually dependent on failure of the reasoning powers."*

Insanity and Crime.—A comparison of the statistics of crime and of mental disease, such as we have, shows that the frequently occurring identity of the etiology of the two classes of morbid psychology is by no means a chance phenomenon. Some statistics recently pub-

* Quetelet's Science of Man, p. 92.

lished in England indicate that the ratio of insane to sane criminals is "thirty-four times as great as the ratio of lunatics to the whole population of England; or if we take half the population to represent the adults which supply the convict prisons, we shall still have the criminal lunatics in excess in the high proportion of 17 to 1!" The following table, constructed from figures furnished by Dr. Wm. A. Guy, F.R.S., in an elaborate paper on "Insanity and Crime," read before the Statistical Society, London, 1869,* places the subject in as clear a light as it is possible to do in the present imperfect state of statistical knowledge on the subject:

The Connection of Crime and Insanity.

Total Population of England and Wales, 1867.	Aggregate Number of Lunatics.	Ratio per 1000 Inhabitants.	Total Number of Sane Criminals.	Total Number of Insane Criminals.	Aggregate Number of Sane and Insane Criminals.	Ratio per 1000 Criminals.
21,429,508	35,758	1.67	6898	396	7294	57

These figures certainly justify the conclusion at which Dr. Guy arrives, and which I have endeavored to establish, namely, "that the criminal population is much more liable to insanity than the community at large," only with the statement reversed thus: the insane population is much more liable to *crime*, than the community at large.

Let us now turn from general to some more special effects of corporeal disease on the mind.

Fevers of the simplest type produce confusion of the mind, so that an individual, if in the habit of writ-

* Journal of Statistical Society, vol. xxxii. pp. 166-67.

ing, finds it difficult to collect his thoughts or to express himself connectedly. The more serious paroxysms of fever destroy the orderly procession of ideas altogether, and at the same time morbidly impress the affectional and emotional powers. So sensitive is the brain to bodily impressions and conditions, that derangements of the latter may often be detected soonest in the former. If a child, he is easily teased, and hard to please; cries on slight pretexts; is combative and obstinate. All this is unlike him, perhaps, and it is generally agreed that he is sick. If a woman, she is morose, peevish, or sensitive; takes more than her usual delight in giving "curtain lectures," etc. If a man, he is irritable; everything goes wrong; his accounts won't balance; he is taciturn; out of patience with the children; does not refrain, as usual, from scolding his wife (when, perhaps, she deserves it)! His conduct is unnatural, and his friends know that he is ill, although no derangement of the bodily functions can yet be detected.

Moreover, particular diseases produce characteristic mental affections and disturbances of the sensorium. An onset of gout, or rheumatism, induces ill humor, irascibility; gastric derangement produces melancholia; inflammation of the liver excites hypochondriasis; inflammation of the lungs causes a variety of beautiful hallucinations, etc. Many of the more serious forms of fever are sadly demoralizing to the mind. Ague and fever furnish an illustration. The best of Christians, it is believed, find it difficult, and some of them impossible, to maintain a reputation for a good moral character under an aggravated attack of that disease. The wide diffusion of that form of malaria

is certainly highly destructive of morals; and a remedy that can successfully cope with it deserves to be ranked among the choicest moral agents. The introduction of the "Jesuits' powder" (Peruvian bark) into England, in the seventeenth century, did more, by the cure of ague, from which thousands died, and many more were mentally demoralized, annually, to correct the gross immorality of those times than any reform in the government and laws, or the pious precepts of over-pious Dissenters. Typhus has been known to impair the moral perceptions, and it has, also, sometimes restored them. Dr. Tuke* details the case of a chronically-demented person, whose only interlude of reason for many years was during the delirium of fever. An eruption of measles, or variola, has frequently been known to invigorate the moral and intellectual powers. In general, it may be observed, that eruptive fevers leave a salutary impression on the mind. I have myself observed several cases of good recoveries from measles, scarlet fever, and variola, followed by the eradication of petty vices and perversities from the character. Such results are certainly very happy compensations for the infliction of very disagreeable maladies.

The effects of gastric disorder upon the mind and morals have been alluded to. The peevishness, moroseness, mental disquiet, and morbid hatefulness of children with sour stomachs, or some other equally slight functional derangement of that organ, is a matter of common observation by parents and nurses the world over; and this cause alone is prolific of more

* *Vide* Maudsley's *Physiology and Pathology of the Mind*, p. 260.

hard scolding and vigorous bare-bottom spansks than all other varieties of inbred or acquired depravity put together. The moral derangements from this source, in the adult, are among the most unhappy and inveterate in the long catalogue; and they lie at the foundation, source, fountain-head, of many of the crimes and misdemeanors that disgrace the court-calendar of civilization. "The despondency and irritability of the dyspeptic," says Dr. Black,* "are burdens grievous to be borne. Miserable in his gloom, pleasure is impossible; and from the merest trifles spring mountains of suspicion, hatred, jealousy, and revenge."

Space will not permit me to give more than this brief passing glance at a very disagreeable, but instructive picture. It will suffice, perhaps, to indicate the intimate relations of body and mind, of crime and disease; and to show the reason why no mind can be certainly sound, in all respects, that is nourished by blood circulating through a body diseased.

"Do we sufficiently estimate," says Winslow, "in our appreciation of others, the effects of *physical* disease upon the character and action of those upon whose conduct we are sometimes called to adjudicate and pronounce judgment? How slight are the changes in the corporeal health! how subtle the variation in the delicate organization of the brain, that precede and accompany remarkable alterations in the *moral* and *intellectual* character! The brave and heroic become as timid and bashful as coy maidens, in particular states of ill health. Mild, inoffensive,

* The Ten Laws of Health, p. 91.

and humane men are driven to acts of desperation and cruelty, under the influence of certain physical diseases disturbing and deranging the operations of thought.”*

Again: the influence of medicinal and toxical agents on the mind is analogous to that of bodily disease. “If the state of the blood be vitiated,” says Maudsley,† “by reason of some poison bred in the body, or introduced into it from without, the mental functions may be seriously deranged. We are able, indeed, by means of the drugs at our command, to perform all sorts of experiments on the mind: we can suspend its action for a time by chloral or chloroform; can exalt its function by small doses of opium or moderate doses of alcohol; can pervert them, producing an artificial delirium, by the administration of large doses of belladonna and Indian hemp.” Certainly, this is all true, and much more, also, of a similar nature. Certain drugs, in their secondary and permanent effect, possess the property of radically corrupting the ordinary procession of ideas; of per-

* *Obscure Diseases of the Brain*, p. 164. And Feuchtersleben says: “Could we penetrate into the secret foundation of human events, we should frequently find the *misfortunes of one man* caused by the *intestines of another*, whom the former endeavored to inspire with sympathy in his fate at a moment when the frame of mind of the latter was affected by impeded secretion. An hour later, and his fortune would have been made.” —*Ibid.*, foot-note, p. 165.

† *Body and Mind*, p. 90. “Sometimes a man, who is patient in the enjoyment of health, becomes passionate, violent, capricious, and unbearable, or impatient and despairing, when he is ill; or those formerly chaste and modest often become lascivious and shameless. It is frequently the case that a sensible man becomes stupid in sickness, whereas, on the contrary, a weak mind is rendered stronger, and a man of slow temperament acquires great presence of mind and resolution.”—*Hahnemann's Organon of Medicine*, foot-note to sec. 212.

verting the moral feelings, character, and intellectual judgments, so that the victim is no longer exactly the being that God made him. These properties are peculiar to narcotic and intoxicating agents in general, as opium, tobacco, hasheesh, belladonna, hyoscyamus, stramonium, henbane, alcohol, etc.

It is interesting to observe the property which some of our best-known drugs have of exciting in the mind peculiar psychical effects. The destructive mania produced by overdoses of belladonna; the jealous furore of hyoscyamus; the religious melancholy of pulsatilla anemone; the obstinate self-will and combative humor of sulphur or chamomilla; the ill humor and passionate irritability of nux strychnos; the moral perversion of mercury; the dejected and sorrowful humor of ignatia, lycopodium, and a few other drugs; the lascivious influences of Peruvian bark; the paralyzing effect of opium on conjugal love and the sexual instinct; the intellectual ideation of the same drug; the maddening, vicious, and profane impulses of alcohol; the morbid fear and cowardice of stramonium; the quieting, soothing, and sensuous hyperæsthesia of tobacco; the intellectual delusions of hasheesh and stramonium, etc., are a few prominent examples of the psychical properties of medicinal agents, well known to all good students of therapeutics and materia medica. It is not unlikely that drug agents may yet be discovered which will supplement, in their action on the mental functions, all the faculties and sensorial impulses of the mind; and be able thus, according to the circumstances and occasion of their use, to exalt the weak faculties and restrain the power and activity of the strong ones. The power of disease to modify

the mental characteristics has already been observed ; and it is generally agreed among therapeutists that medicines act on the same principles that morbid agents in general do. "There is no difference in principle," says Dr. Martin Paine, "as to their absolute action. In certain remedial quantities, many may induce, in the healthy organism, various degrees of disease with as much certainty as those agents which are called morbid."* They enter the circulating system and are carried to every part of the organic domain, acting on it, and are in turn acted upon, absorbed into the structure, and become a component of every fibre and nerve-cell of every organ of the body. Thus do they penetrate and influence the inmost source of mental power in a characteristic manner. It may not be unprofitable to examine, in some detail, the mental effects of a few substances of questionable utility, but in general use, among mankind. In the first place, however, it is important to notice the general bearings of diet on the processes of the mind, both as to its *quality* and *quantity*.

1. In respect to the essentials of a proper diet for man, the scientific world are at loggerheads. The chemists claim that an article of food which meets all the demands of nutrition must have represented in its elementary constituents all the chemical elements of which the human body is composed. Moreover, there must be carbonaceous food to give warmth, and nitrogenous food to furnish the requisite flesh and strength,—to provide the *plasm* out of which the sub-

* Institutes of Medicine, § 854, c.

stantial parts of the body are built up and maintained. The vital physiologists, on the other hand, invest the living tissues with the power of transmuting elements, and thus of elaborating, from any compound possessing the proximate principles of food, every needed element of nutrition. The chick, they say, elaborates bone from a pabulum in which exists no calcareous substance; and the human economy can manufacture bone and brain as well from one alimentary substance as another. This is a very common error, and one which finds excuse in the evils and absurdities of those who attempt to educe by chemical analysis and the balance the amount and kinds of food required for the sustenance of the body. Many of the Greek philosophers and poets thought it grossly unbecoming in man to busy himself with the process of digestion or the care of his body, which at best was only a poor tenement which he was better off without than with. Thus says Plato: "How can they addict themselves to the practice of virtue and the service of God, who are ever caring for their own miserable bodies?" The question raised by Plato was thought unanswerable by the Stoics of his day and the hosts of Christians of a later day, who sustained their pretensions to piety by the zeal with which they mortified and debased their bodies. Moral ideas and ethics have undergone a change since then; and the pious devotee is no longer slow to accept a philosophy which makes the perfection of the body an indispensable concomitant of morality.

Among all classes of writers on the subject, two conditions only are recognized as indispensable to a proper dietary: first, *alimentary material*; and second, *digestibility*. Dietitians may differ widely in respect to

the dietetic character of man ; but once having agreed upon the kind of diet, whether flesh and mixed, or vegetables and fruits, the rest is arranged without dispute. The organism is likened to a piece of subtle mechanism, requiring nothing from external sources but materials for repair and lubrication, and sufficiency of fuel to furnish heat and maintain the movement of its complex enginery. The stomach is conceived to be a mill for breaking down and otherwise converting crude materials into proper conditions for vital uses. If there are aliments unwholesome and incapable of subserving these purposes, it is owing to the existence in them of chemical reagents or principles incompatible with the normal constituents of the blood, rather than to any peculiar and inappropriate vital quality which they possess ! It will be observed that this philosophy of diet and nutrition is as appropriate to the animal as to man ; and if it be inadequate in its application to the latter, it is owing to the crude and incomprehensive views of chemists and physiologists, rather than to any unfair or undigested statement of it.

This philosophy of diet and nutrition is too narrow in its application to either animals or man. If man be a natural being, formed from the dust of the earth, every element of his mentality,—every moral and intellectual principle and selfish and personal impulse of his nature,—is comprehended in the “protoplasm” from which his organization is derived. The elements and proximate principles of food must contain the sublime possibilities of human mentality, and it needs but the vital chemistry of the human body, and the transforming influences of the solar ray, to detect and transform them to its uses and give them visible ex-

istence. This sounds like rank materialism! and so it is; but it is a logical deduction from our premise, for all that. Nor should the conclusion startle any one, for it is undeniable, unless indeed man is supernatural in his derivation, that matter and mind supplement each other in the organic world. Their relations are mutually dependent and interdependent; and no narrow prejudice, or preconceived notions of materialism or immaterialism, can disturb that relation. The province of the philosopher is to observe nature, not to make her; to study phenomena, not to transform and mould it; to accept sequences with reverent faith and trust, and not attempt to circumvent them with trembling doubt and distrust. If God, the Eternal, resides in matter, materialism is, surely, respectable. If he breathes his life and immortality upon it, it certainly is not unequal to the evolution of the noblest powers of which man can boast.*

That man derives his mental powers from nature is no new hypothesis, as has already been observed. Hippocrates, the "father of medicine," endeavored to establish that all men were born with equal mental capacity; and that the subsequent mental variations arose altogether from differences of diet in after-life.†

Nutrition, then, comprehends, not only the supply of the visible and material fabric of the corporeal sys-

* "And so I look on those sentiments which make the glory of the human being, love, humility, faith, as being also the intimacy of Divinity in the atoms; and that, as soon as the man is right, assurances and previsions emanate from the interior of his body and his mind: as, when flowers reach their ripeness, incense exhales from them, and as a beautiful atmosphere is generated from the planet by the average emanations from all its rocks and soils."—*Emerson's Conduct of Life*, p. 202.

† Winslow's *Body and Mind*, p. 114.

tem, the bone and sinew, muscle, and nerve, and brain, but, also, the psychical powers of thought and feeling. The quality of the diet influences the quality of the mind and disposition. The mental character is modified, exalted, or depraved, according to the quality and quantity of the food one eats. The most important question in dietetics, therefore, is, What kind of food is most conducive to the development of the human excellences? rather than, What is most digestible? What kind of diet is most favorable to civilization, to the growth of honor, honesty, and virtue? rather than, What is most prolific of bone, brain, and fat? for it is undeniable that the latter elements are largely in excess of the former in modern society and civilization.

The facts in support of our hypothesis are by no means few. The influence of *quality* of diet on one's disposition is strikingly illustrated in the animal kingdom. Contrast the mild herbivora with the flesh-eating carnivora; or, more strikingly still, compare the effect of different diets on the same species. If we wish a dog to be particularly ferocious, we give him raw flesh to eat. The common house-cat is rendered decidedly *feline* in disposition by an exclusive diet of flesh, or mild and tractable on a mixed diet. Wild animals are tamed and made docile, and many of them companionable, by substituting a vegetable or mixed diet for their native one of flesh. A mild, soothing diet very soon subdues the ferocity of the tiger, and subjugates the ravenous propensities of the other members of that family. Moreover, the converse of this mental transformation, through the influence of food, is illustrated by feeding the herbivora on animal food. Mr. Graham quotes an observation of Bishop Heber, to the effect

that, "in Norway, as well as in some parts of Hadramaut, and the Coromandel coasts, the cattle are fed on the refuse of fish, which fattens them rapidly, but serves at the same time totally to change their nature, and render them unmanageably ferocious." Many other writers have made similar observations. Who knows but that a diet of milk and honey would transform the disposition of a lion, and enable that classic beast and a lamb to lie down together peacefully?*

The effect of an exclusive flesh diet on man is similar to that which it produces on animals. "Fuseli, the painter, was in the habit of eating raw meat for the purpose of engendering in his imagination horrible fancies. . . . With the view of making Achilles a hero, he was fed on the marrow of lions."† Illustrations of the hypothesis may be found among the savage tribes on our borders, the natives of the islands of the South Seas, and all other exclusively flesh-eating peoples. Exclusive flesh-eaters are characterized, the world over, as mercilessly cruel, revengeful, and blood-thirsty. The fish-eating tribes are an exception to this statement; but, then, fish is not flesh! People who subsist exclusively on fish and the animal oils, while not distinguished for exemplary piety, are, nevertheless, less given to the indulgence of savage impulses than other flesh-eating tribes. In Green-

* "If any dependence can be placed upon the statements which have come to us from reputable authority, even the tiger, if taken very young and reared upon a vegetable and milk diet, without ever being permitted to taste of flesh, becomes remarkably gentle, and manifests none of that ferociousness which is common to its species; but if afterwards it be fed upon flesh, it soon becomes ferocious and cruel, and destructive."—*Graham's Science of Human Life*, p. 486.

† Winslow's *Body and Mind*, p. 114.

land, Nova Zembla, and other northern countries, where the natives live chiefly, and sometimes exclusively, on fish, seals, and other animal substances, corporeal sluggishness and mental stupidity are the predominating traits of character. Fish, therefore, is regarded as less stimulating than the flesh of warm-blooded animals. "Flesh-meat is more stimulating," says Sylvester Graham,* "more heating, than vegetable food; and its immediate effect on those who eat it is to increase the energy of the more exclusively selfish propensities, and the violence of the more turbulent, ferocious, and mischievous passions. Its permanent effects, from generation to generation, as a general fact, are to increase the relative proportion of the lower and back part of the brain, and to cause the animal to predominate over the intellectual and moral man." The author sustains his position with an array of facts from natural history and individual experience, which challenges the respectful consideration of those who have the moral well-being of man at heart.†

On the other hand, a mild, unstimulating diet

* *Science of Human Life*, § 1232.

† It will be observed, that it is no part of my subject to discuss the natural dietetic character of man. While an exclusive vegetable diet lessens the force and activity of the propensities, it probably impairs the vigor of the intellect also, and the stamina of the physique in general. Mr. Graham, in his able work on the "*Science of Human Life*," brings forward a long array of facts respecting the mental effects of various articles of diet, which he claims demonstrate his vegetarian hypothesis. While we are not at liberty to dispute the facts he adduces, since they are drawn from natural history, and are accessible to all, we may reject his logic; or, accepting both facts and logic, we may still dissent from his conclusion; for it may be reasonably doubted if mankind are ready for the era contemplated as contingent on the universal abandonment of flesh food, and other stimulating substances, when the nations shall dwell together in peace, and "the lion shall eat straw like the ox"!

weakens the force and activity of the passions, and promotes mildness, placability, and sweetness of temper. This fact finds confirmation in the well-known manners and customs of all vegetable-eating tribes of the human family. With no desire to claim for these numerous races transcendent virtues, or to concede to them a mentality, as a whole, superior to that of the omnivorous Caucasian, it is undeniable that their dispositions exhibit characteristics just the opposite of those of the exclusively flesh-eating savages; and that public morality among them is in striking contrast with that of the most civilized Christian community of which history has any knowledge. Take, for example, the numerous family of Hindoos. Their food consists chiefly of rice and fruits, to which is added a moiety of *pulse*, or dried fish. They are the mildest-mannered race on the face of the earth. Their regard for life, in every form, is too sacred to permit its sacrifice for any purpose whatever. They have an instinctive horror of fat, which is so deep and ineradicable that its bare mention is regarded as a gross insult. Their civilization and code of laws are the oldest in history; and if the people are mild and unwarlike,—more Christ-like than their western neighbors,—the better classes of them are not inferior to them in the power of subtle analysis or metaphysical research. The theology of Gôtama is certainly more logical and of finer conception than that of Paul or Constantine.

If the comparative excellence of food be tested by the power it has of influencing the moral and intellectual character of man, preference must obviously be given to the higher productions of the vegetable king-

dom,—fruits and farinaceous food. In this class must also be included those precious concomitants of civilization,—tea and coffee. Physiologists and dietitians differ widely respecting the physiological properties of those peculiar substances, and also in the estimate of their value as food, and their specific effects upon the animal economy. The modern chemical and physiological estimate of food, however, is based, as it has been shown, on a very crude and imperfect—I should say, fallacious—judgment. They may, indeed, analyze it; point out, weigh, and measure the proximate principles and chemical elements of an aliment submitted to them; but the subtle, deific essence and potential quality is beyond the detective agencies of acids and alkalies, or the crucible and balance. The chemical properties, for instance, of caffeine and theine are identical, and yet their specific effect upon the cerebral functions of most people is very dissimilar.

Individual experience is the final test of the specific virtues or vices, or other properties, of any alimentary or other substance, interpreted by broad observation, objective as well as subjective. The verdict of this test is overwhelmingly favorable to the hypothesis that both tea and coffee support the nervous energies, and maintain the intellectual processes. Literary people resort to them for aid in composition, and students and men of science imbibe them to clear the mind and sustain prolonged mental effort. The German chemist, Liebig, it is said, was in the habit of writing with a cup of coffee always before him. In circumstances of great anxiety, or unusual tension of the nervous system, prolonged watching, depressing emotion, privation of food, etc., tea and coffee—especially coffee—are most

serviceable. "What an important effect is this!" exclaims Dr. Chambers, in dilating upon the influence of these substances in restraining the waste of the system. "The tea and coffee drinker may have less to eat, and yet lose less weight—wear his body out less—than the water drinker. At a comparatively small expense, he may save some of the costly parts of his diet,—those nitrogenized solids that entail so much thought, labor, and anxiety to obtain."*

Abd-el-Kader, the son of Mohammed, may well have gone into ecstasies over the discovery of coffee. The following encomium upon that beverage is said to have been written by him:

"O Coffee! thou dispellest the cares of the great! thou bringest back those who wander from the paths of knowledge! Coffee is the beverage of the people of God, and the cordial of his servants who thirst for wisdom. When coffee is infused into the bowl, it exhales the odor of musk, and is of the color of ink. The truth is not known, except to the wise, who drink it from the foaming coffee-cup. God has deprived fools of coffee, who, with invincible obstinacy, condemn it as injurious.

"Coffee is our gold, and in the place of its libations we are in the enjoyment of the best and noblest society. Coffee is even as innocent a drink as the purest milk, from which it is only distinguished by its color. Tarry with thy coffee in the place of its preparation, and the good God will hover over thee and participate in the feast. Then the graces of the saloon, the luxury of life, the society of friends, all furnish a picture of the abode of happiness.

* Digestion and its Derangements, p. 249.

"Every care vanishes when the cup-bearer presents the delicious chalice. It will circulate fleetly through thy veins, and will not rankle there. If thou doubtest this, contemplate the youth and beauty of those who drink it. Grief cannot exist where it grows. Sorrow humbles itself in obedience before its powers.

"Coffee is the drink of God's people. In it is health. Let this be the answer to those who doubt its qualities. In it we will drown our adversities, and in its fire consume our sorrows. Whoever has once seen the blissful chalice will scorn the wine-cup. Glorious drink! Thy color is the seal of purity, and reason proclaims it genuine! Drink with confidence, and regard not the prattle of fools, who condemn without foundation!"*

Bayard Taylor says "the coffee of the East is the finest in the world;" and while he does not give its virtues the extravagant praise which he bestows upon tobacco, he remarks that he has "found it so grateful and refreshing a drink, that I can readily pardon the pleasant exaggeration of the Arabic poet, Abd-el-Kader Anazari Djezeri Hanbali, the son of Mohammed, who thus celebrates its virtues."†

It would seem in bad taste to follow this fine eulogium with any statement derogatory of coffee; but with every possible deference to Abd-el-Kader's highly-wrought opinion, it must be admitted that there are temperaments and conditions with which the beverage disagrees; moreover, its influence upon

* Dr. C. A. Lee's "Notes to Pereira's Food and Diet." This eulogy on coffee was translated from the Arabic, and published in a German journal in 1834, according to Dr. Lee.

† The Lands of the Saracen, p. 184.

the propensities generally is anything but sedative. In this respect its world-renowned congener and supplement, tea, is far more deserving of the high compliment of being the "drink of God's people." Pure, unadulterated tea is an intellectual tonic of unalloyed efficacy.

2. *Quantity* in diet is also an influential agency in mental hygiene. Excessive alimentation produces plethora and a general increase of the powers of the animal functions. This fact is noticeable in all high and irregular feeders. Thackeray observed, "that sometimes, especially if he had been dining late, and did not feel in remarkably good humor next morning, he was inclined to make his characters villainously wicked; but if he arose serene, with an unclouded brain, there was no end to the lovely actions he was willing to make his men and women perform."* The mental demoralization from this cause has been recognized from time immemorial. The leading moralists of the world have been mindful of the value of the fact; and in order to fit their minds for the perception of the true and divine, have abstained from food, sometimes for long periods. Fasting is necessary to rise to the dignity of a Buddhist in the great Hindoo system of religion. Christ fasted forty days before fully entering upon his divine mission. The early Christians resorted to the fast to chasten their minds and sweeten their hearts. Its influence is so potent upon the morals of mankind that it early became an established rite in the primitive Christian church; and it is to be sincerely regretted that its observance is so

* Yesterdays with Authors. Fields.

lightly regarded in the Protestant churches. Milton has remarked the favorable influence of fasting and prayer upon the passions.* It is interesting to note, that while any considerable degree of fasting weakens the intellectual faculties, it quickens, if not carried too far, the moral sensibilities, and enlivens the nobler feelings and emotions. When carried to too great lengths, however, it perverts and deranges them all. Dr. Moleschott justly says:

“There is another instinct by which the vigor of mind is vanquished in a more melancholy way. Hunger desolates head and heart. Though the craving for nutriment may be lessened to a surprising degree during mental exertion, there exists nothing more hostile to the cheerfulness of an active, thoughtful mind than the deprivation of liquid and solid food. To the starving man every passion becomes an intolerable burden; for this reason, hunger has effected more revolutions than the ambition of disaffected subjects. It is not, then, the dictate of cupidity or the claim of idleness which prompts the belief in a natural human right to work and food.”† Dr. Moleschott, evidently, does not believe in the uniform beneficence of fasting.

Moreover, the moral effect of fasting is also remarkable on animals. Bears are tamed by being deprived of their customary amount of food, and afterward confined to a mild diet. In India, wild elephants, when captured, are always tamed by depriving them of food until signs of great emaciation are discovered. “They

* Prose Works, vol. iii.—Doctrines and Discipline of Divorce.

† Huxley's and Youmans' Physiology and Hygiene, pp. 32-7.

are then fed with mild aliment, and soon acquire their usual flesh, but without the least return of their ferocity."*

In many diseases, likewise, fasting is highly beneficial. I have known instances of the most inveterate maladies yielding to the influence of a prolonged fast. People with enlarged livers are always favorably influenced by it; and gouty people in general find it conducive to recovery. Dr. Rush recommends a low diet in some forms of madness.† In spinal irritation, I have known it to produce the most decided salutary modifications of the disease.

It should be remembered, however, that the hygienic value of fasting can be realized and appreciated only by those who habitually indulge in excess of eating and drinking. The under-fed suffer from evils and abuses of a totally different sort, to which fasting manifestly does not apply. Such is the influence of the corporeal functions upon the mind, that temperance in all things is demanded by the highest considerations of morality and hygiene. "If you would live long," said the distinguished Hufeland, "live moderately, and avoid a stimulating, heating diet, such as a great deal of flesh, eggs, chocolate, wine, and spices."

* Rush on the Mind, p. 193.

† Ibid.

CHAPTER II.

MENTAL INFLUENCE OF PHYSICAL AGENTS—CONTINUED.

HOWEVER potent for mental weal or woe the influence of food may be, there are numerous stimulating and narcotic substances in daily use, by many people, whose specific effects are directly perverting to the mental functions. These substances embrace the whole catalogue of stimulating, medicinal, and narcotic agents in general, alcohol, opium, and tobacco in particular.

The warmest advocates of the habitual use of these agents do not claim that they possess any special nourishing quality. The most that can be said of their physiological uses is, that alcohol furnishes heat to the system in its chemical transformation, and that all these agents restrain the vital wear and tear. It remains to be seen if these uses are not fulfilled at a fearful waste of mental and moral life. Mr. Graham justly remarks, that "all pure stimulants, or those substances which stimulate without nourishing, increase the general irritability of the nervous system; and all alcoholic, narcotic, and other deleterious stimulants always produce more or less of morbid irritability in the system, according to the extent to which they are used. The activity caused by such means never healthfully increases the size of any organ or

organs thus excited. But, as we have seen, it always increases the influence of certain cerebral organs over the others,—always tends to cause a predominance of the more exclusively selfish propensities over the intellectual and moral faculties.”*

1. Opium, of all the pure narcotics, is the most powerful in turning the mind out of its natural bent and perverting the normal procession of ideas. If it be “the sheet-anchor of the profession,” its abuse has caused thousands, who learned the secret of its powers from the profession, to curse the very name of doctor, and to regret that human ingenuity ever conceived the necessity of the profession having a “sheet-anchor” at all. Its specific action is chiefly on the imagination. In small and repeated doses it increases the power and brilliancy of the fancy, and adds a charm to the sensibilities, which few, once under its fascinations, are able to resist. In this respect its powers are superior to any known drug, and are not even inferior to those of the arch-beguiler, referred to in the ancient fable, nor less potent to destroy. With the development of its chronic effects, however, this charm is broken. The faculty of ideation is gone; ennui is induced; many of the animal instincts are destroyed; the subject is possessed of strange fancies and forebodings, which give him no rest by day nor sleep at night. The will is broken, in serious cases, so that the individual is like a ship on a restless sea without a helmsman, completely at the mercy of restless impulses, which come and go like the surging waves without his bidding or control. Opium weakens the memory also, and in some in-

* Science of Human Life, § 1202.

stances impairs the moral perceptions, the sense of honor and veracity.*

Opium-smoking is largely practiced throughout China, although the laws of that country forbid the indulgence of the habit. Deaths from it there are not unfrequent, and are among the most horrible known to mankind. Experienced opium-smokers require about twenty pipefuls to produce its characteristic exhilarating effects. Bayard Taylor, when at Canton, a few years since, smoked six pipefuls at one sitting; and he found the experiment so fascinating upon his emotions that he did not dare to repeat it. "To my surprise," he writes, "I found the taste of the drug as delicious as the smell is disagreeable. It leaves a sweet, rich flavor like the finest liquorice upon the palate, and the gentle stimulus it communicates to the blood in the lungs fills the whole body with a sensation of warmth and strength. The fumes of the opium

* See Mr. Ludlow's paper on Opium-eating, in "Harper's Magazine," vol. xxxv. A writer in "The Opium Habit" says: "Opium weakens or utterly paralyzes the lower propensities, while it invigorates and elevates the superior faculties, both intellectual and affectional."—p. 216. This is the primary effect only. De Quincey was in the habit of augmenting his sensibility with opium on any special occasion of interest or enjoyment. "In those days," he says, "Grassini sang at the opera, and her voice was delightful to me beyond all that I had ever heard; and when she appeared in some interlude, as she often did, and poured forth her passionate soul as Andromache at the tomb of Hector, I question whether any Turk, of all that ever entered the paradise of opium-eaters, could have had the pleasure I had. And, over and above the music of the stage and orchestra, I had all around me, in the intervals of the performance, the music of the Italian language, talked by Italian women, for the gallery was usually crowded with Italians; and I listened with a pleasure such as that with which Wild, the traveler, lay and listened, in Canada, to the sweet laughter of the Indian women; for the less you understand a language, the more sensible you are to the melody or harshness of its sounds."—*The Confessions of an Opium-eater*.

are no more irritating to the windpipe or bronchial tubes than common air, while they seem imbued with a richness of vitality far beyond our diluted oxygen. I had supposed that opium was smoked entirely for the purpose of mental exhilaration; and that to the smokers, as to many who intoxicate themselves with ardent spirits, there was no sensual gratification in the mere taste of the article. The reverse is evidently the truth, and the practice, therefore, doubly dangerous. Its victim becomes hopelessly involved in its fascinating illusions, and an awful death, such as I had witnessed not long before, is sure, sooner or later, to overtake him who indulges in excess. I have a pretty strong confidence in my own powers of resistance, but do not desire to make the experiment a second time."*

2. The effects of opium may be deeper and more subtle, but nothing in the whole range of toxicological agents so soon dehumanizes an individual as the excessive use of alcoholic liquors. "Nothing, we think," says Dr. Carpenter, "can be more plain to the unprejudiced observer than that the introduction of intoxicating agents into the circulating system really prevents the action of the *mind*, disordering the usual sequence of phenomena most purely psychical, and occasioning new and strange results which are altogether at variance with those of its normal action."† "A man who, sober, is a demi-god, is, when drunk, below even a beast."‡ In small doses it is a direct

* India, China, and Japan, pp. 493-4.

† Human Physiology, p. 537.

‡ The Opium Habit, p. 216.

stimulant, increasing the force and volume of the pulse, the flow of ideas, and general mental activity.

History furnishes many distinguished examples of mental dependence upon stimulants, alcoholics, and nervines. "Æschylus, if we are to credit Ælian, could never write until he was intoxicated, and according to Horace, this was the case with Ennius and Cratinus. Ben Jonson wrote best under the influence of canary ; Sheridan prepared his marvelous speech on the Oude charge in a tavern, after swallowing tumbler after tumbler of brandy. The younger Pitt was often under the influence of port when he spoke, and Dundas, if we may believe one of Porson's epigrams on the subject, could never speak till he was 'far gone.' Blackstone wrote his 'Commentaries' with a bottle of port before him, and 'Vathek' Beckford was supported by constant draughts of the same. Shadwell stimulated himself by opium. The arch impostor, Psalmanazar, Coleridge, and De Quincey, used the same stimulant. Dryden and Fuseli ate raw meat to inspire vivid dreams. Voltaire was never without his coffee, and Byron wrote 'Don Juan' under the influence of gin."*

The mental vivacity of alcohol, however, is of short duration, and the demand for repeated and increasing doses is soon tumultuously experienced. With the subsidence of its primary effects, there is exhaustion of the physical and mental powers. The subject is listless and nervous ; disinclined to physical or mental effort ; loses all spirit and ambition.

The chronic moral derangements of alcohol are much modified by temperament, occupation, and cli-

* The Golden Age.

mate. Dr. Carpenter* says: "The irritable and ill-tempered become quarrelsome; the weak and silly are boisterous with laughter and mirth, and profuse in offers of service; and the sad and hypochondriacal readily burst into tears, and dwell on mournful topics." To an individual who is wanting in moral balance, with dominant passions, or in whom the blood is thin, cachectic, and impoverished, alcohol is, even in small doses, most demoralizing. On such individuals the effect is decidedly inflammatory, exciting the propensities, and converting an otherwise inoffensive man or woman into a ferocious fiend. The moral perceptions are perverted by it. The slightest rebuff is magnified into the grossest of insults, and made the occasion and pretext for resentment and revenge. He labors under insane delusions. He fancies he is wronged and persecuted by his dearest friends,—by his wife, or possibly his children; and the kindest overtures from them are often interpreted as a disguise in order to obtain some profit or personal advantage over him. He is suspicious and melancholic, or jealous and trusting, loving and hating, or generous and parsimonious, in alternating and fleeting paroxysms. He is incapable of fidelity, or of choosing between good and evil, right and wrong, the false and true, or the magnanimous and deceitful. When the moral judgments are thus perverted, an individual is surely reduced below the low level of the wild beasts, that hunt their prey and devour and appropriate, without mercy or remorse, whatever serves to appease hunger or to gratify animal desire. Such beings have little moral responsibility; and

* *Alcoholic Liquors*, p. 31.

an individual who is thus debauched by alcohol, or other intoxicating and demoralizing agents, or habits, has little more sense of justice and right than the tiger or gorilla of the African jungle.

These may be said, by the apologists for the use of intoxicating drinks, to be the moral effects of *abuses* of alcohol; and such they are. It is, however, a matter of controversy where the proper *use* ends and the *abuse* begins. With all due deference to the distinguished savants who think otherwise, my opinion is that in health, alcohol, in any disguise, has no rights in the human blood entitled to anybody's respect; that it is a toxical agent, with well-defined effects and morbid tendencies upon both body and mind, and cannot be introduced into the circulating system without seriously compromising the physical and moral well-being.

The views of Dr. Carpenter and others concerning the general and specific effects of alcoholic liquors upon the animal economy, although opposed by many, are corroborated by those of a large majority of the medical profession. The State Board of Health of Massachusetts, of which Professor H. J. Bowditch is chairman, has recently (1871-2) given the subject of intemperance in the various countries of the globe, and especially in Massachusetts, a most thorough investigation. Its report to the legislature of that State lies before me; and it is replete with facts and figures, going to show the general demoralization consequent upon the habitual use of intoxicating liquors, and is derived from sources which cannot be gainsaid, being the medical profession itself of that State, and the ministerial and consular service of the United States, throughout the civilized world.

There is diversity of opinion expressed in response to the inquiries of the Board; but the general sentiment of a majority, as expressed by one of their number, is that "the effect of the use of intoxicating liquor is here, as elsewhere, injurious to health and destructive to life; never useful as a beverage, and seldom, if ever, as a medicine. The users are not the only sufferers, but they leave to their children an inheritance of bodily and mental disease."* But the most important generalization to be deduced from the report is that concerning the comparative prevalence of intemperance among the different climates and peoples of the earth. The conclusion at which Professor Bowditch arrives, and which is a legitimate inference from the data collected, is thus stated by him: "Intemperance prevails the world over, but it is very rare at the equator. The tendency increases according to latitude, being more frequent and more brutal and disastrous in its effects on man and society as we approach the northern regions."† The clear-headed Maudsley thus draws the parallel between mania and alcoholism:

* Third Annual Report, State Board of Health, p. 77.

† "The State Board of Health" of Massachusetts, in 1870, addressed the following inquiry to the members of the medical profession throughout that State: "What in your judgment has been the effect of the use of intoxicating liquor as a beverage upon the health and lives of the people of your town, or in the region in which you practice?" In response to this inquiry one hundred and sixty-four [164] replies were received, of which the following is a summary:

'Very destructive to life and health	48
Injurious to a greater or less degree	49
Public health not affected by use in their town	16
The people in their town very temperate	27
Intoxicating drinks not used in their town	5

"Alcohol yields us, in its direct effects, the abstract and brief chronicle of the course of mania. At first there is an agreeable excitement, a lively flow of ideas, a revival of old ideas and feelings which seemed to have passed from the mind; a general increase of mental activity,—a condition very like that which often precedes an attack of acute mania, when the patient is witty, lively, satirical, makes jokes or rhymes, and certainly exhibits a brilliancy of fancy which he is capable of at no other time.

"Then there follows, in the next state of its increasing action, as there does in mania, the automatic excitation of ideas, which start up and follow one another without order, so that thought and speech are more or less incoherent, while passion is easily excited. After this stage has lasted for a time,—in some shorter, in others longer,—it passes into one of depression and maudlin melancholy, just as sometimes mania passes into melancholia, or convulsions into paralysis. And the last stage of all is one of stupor and dementia. If the abuse of alcohol be continued for years, it may cause forms of mental derangement, in which the muscular are curiously like the mental symptoms: delirium tremens in one, an acute, noisy, destructive mania in another, chronic alcoholism in a third, and a condition of mental weakness, with loss of memory and loss of energy, in a fourth."*

The evil is bad upon foreigners in their town, but not upon natives .	4
Useful in decline of life	I
Use promotes longevity	I
Indefinite replies	13"

The Report altogether is a most able and instructive document, and deserves to be widely read and reflected upon.

* Body and Mind, pp. 91-2.

In respect to the sphere of the specific influence of alcohol, and the mode of its physiological action, Dr. Carpenter observes :

“The selective power of alcohol appears to lead it in the first instance to attack the cerebrum, the intellectual powers being affected before any disorder of sensation or motion manifests itself; and to this it seems to be limited in what has been here described as the *first* stage of intoxication. But with the more complex perversion of the intellectual powers, which characterizes the *second* stage, we have also a disturbed function of the sensory ganglia, upon which the cerebral hemispheres are superposed; this disturbance being indicated by the disorders of sensation, and also by the want of that control over the muscular movements which require sensation for their guidance. In the *third* stage the functions of the cerebrum and sensory ganglia appear to be completely suspended; and those of the medulla oblongata and spinal cord now begin to be affected, as we see to be indicated by the difficulty of respiration, the strabismus, the dilated pupil, and the tetanic spasms.

“As already stated, the admixture of alcohol with the blood has a tendency to give a venous character even to that of the arteries; and when this tendency is augmented by imperfect respiration, the blood will become more and more venous, until its influence upon the medulla oblongata is so directly poisonous that its functions are completely suspended, the respiratory movements are brought to a stand, and death takes place by asphyxia, precisely as in narcotic poisoning by other substances.”*

* Alcoholic Liquors, p. 36. See Notes at end of chapter, page 92.

The fearful demoralization consequent upon the habitual use of alcoholic liquors is a fact of too general observation to need further elucidation. Statistics of disease and crime have long since placed the matter beyond the limits of reasonable skepticism. The following table, compiled from the records of the Essex (Mass.) House of Correction, exhibits the percentage of common drunkards admitted for a series of years. The variations in the annual percentage of commitments are owing to the different degrees of vigilance exercised by the police and others in enforcing the prohibitory and license laws:*

YEARS.	Whole No. of Commitments.	Common Drunkards.	Per Cent.
1861 . . .	402	107	24
1862 . . .	395	94	24
1863 . . .	415	121	29
1864 . . .	207	48	23
1865 . . .	174	27	15½
1866 . . .	225	19	8½
1867 . . .	177	18	10
1868 . . .	261	39	14½
1869 . . .	214	45	21
1870 . . .	232	29	12½

Returning to the influence of nervines and narcotics, we remark that they all exercise specific affinities for particular centres of the nervous system, and that their abuse leads directly to the development or assertion of those specific effects upon the nervous powers. For example: the *nux vomica* has an affinity for the medulla oblongata and the spinal cord, as observed in its well-known power of producing paralysis and palsy;

* Third Annual Report State Board of Health of Massachusetts, p. 117.

opium and alcohol for the brain and superior nervous centres, as proved by their influence over the ideas and feelings, and the power they possess of restraining and causing nervous disintegration. Belladonna, Indian hemp, hyoscyamus, prussic acid, stramonium, etc., have also affinities for particular portions of the sensorium, as shown in the peculiar character of their psychical effects,—paralysis, hallucinations, delusions, etc. Tobacco, on the other hand, seems to act more on the social powers,—the selfish propensities and sentiments,—according to the observation of many credible writers. The immoderate use of coffee influences the social instincts in a very similar manner, and exerts also a decidedly tonic effect upon the brain, and, as has already been observed, the faculty of ideation in particular.

We are cognizant of the case of a little boy of a most irritable and vexatious disposition, who is always put in an agreeable, pleasant humor by a cup of tea or coffee. Such facts are certainly not alone peculiar to little children. We have frequently observed them in children of a larger growth. There can be no doubt, therefore, that nervines of such powers can be easily abused, nor that they *are* abused. The brain and nervous system are frequently overtaxed through their influence, and the mind impelled to do an amount of work, and to undergo degrees of fatigue, which, without the aid of coffee or tea, it could not do, and would be all the better for the failure to do. Sooner or later morbid consequences, of a nervous character and serious nature, are likely to supervene.

If it be true—and nothing in medicine is more firmly established—that certain medicines possess the

property of modifying the normal feelings, appetites, and character of man, exalting, depressing, and actually of corrupting his morals, and the quality of his thoughts and sentiments, it is an interesting fact, and one having an intimate connection with mental hygiene. The circulation must be zealously guarded against their intrusion to the sacred domain, if we would avoid the risk of developing impaired nerves, nervous idiosyncrasies, and mental derangements,—a most difficult thing to do, surely, when we reflect upon the wholesale and almost universal adulteration of almost every form of food and drink; and that even the air we breathe is filled with infusoria, dust, noxious gases, malaria, etc., which prey upon the integrity of the organic functions.

Unwholesome causes from these sources may not be wholly avoidable in the present state of public morals, ignorance of the laws of health, and the insane desire for riches; but there are many other sources of blood-poisoning and moral perversion equally flagrant, which are by no means beyond our control. Among them we may mention patent medicines; indiscriminate or careless prescriptions of over-confident and too hopeful doctors; popular mineral waters and cure-all springs; innumerable varieties of beer-slops, gulped down by the wholesale; cheap wines and liquors in general use; tobacco-chewing and smoking, etc.* The evils arising from the last-named sources are of a nature too serious and wide-spread to be passed over with the bare mention of them.

3. The influence of tobacco on the nervous system

* Prof. John Fiske estimates the number who habitually use tobacco at 800,000,000, an evident exaggeration. See his monograph in vindication of tobacco-smoking and wine-drinking.

presents some features unlike those of other narcotics. Poisonous to the last degree, as any novice in the exceedingly common "accomplishment" of chewing or smoking can attest, it cannot be wholly innocent of the charge its enemies have made, of impairing the physical energies, or of perverting the nervous functions. To those whom temperament or peculiar idiosyncrasy renders inordinately susceptible to its properties, tobacco does vitiate both body and mind; on others of less nervous susceptibility its effect is not so clear and well defined. That such large numbers of human beings are able to take, day after day, and year after year, a drug of such confessed virulence, in such massive doses, is one of the most remarkable phenomena of organic life!

The active principle of tobacco is nicotine, an alkaloid exceedingly poisonous in its pure state, of which there is enough in a single cigar to kill several men. "According to the experiments of Vohl and Eulenberg, the nicotine is decomposed, in the process of smoking, into pyridine, picoline and other [less] poisonous alkaloids." Mr. Axon, in the "Quarterly Journal of Science," says that "the peculiar effects of tobacco are due to the action of the essential oil of tobacco in the case of chewing and snuffing, and to that, combined with the empyreumatic oil, in smoking."*

From some systematic experiments of Dr. Edward Smith, which he communicated to the British Association in 1864, tobacco, when smoked, acts primarily upon the heart, accelerating the pulse in some in-

* See his able paper, "The Physiological Position of Tobacco," in the Quarterly Journal of Science, London, October 1872.

stances to a maximum of thirty-seven and a half pulsations per minute—thus increasing the labor of that organ at least fifty per cent. “The effect upon the heart,” says Mr. Axon, in the paper referred to, “is not caused by direct action upon that organ, but by paralyzing the minute vessels which form the batteries of the nervous system. Thus paralyzed, they can no longer offer effectual resistance, and the heart, freed from their control, increases the rapidity of its strokes, expanding the vessels with an apparent accession, but real waste, of force.” This effect of tobacco, in accelerating the pulse, is well known to every observant user of the weed. From several physicians, smokers of tobacco, to whom I have put the question, What effect does smoking have upon you, doctor? the reply has invariably confirmed this view of its influence upon the pulse. An old client of mine has frequently been compelled to abandon the habit of smoking, which, aside from his sense of its luxury, he finds necessary to restrain the tendency to obesity, owing to its effect in accelerating the pulse. I have known his pulse to increase its rate from twenty-five to thirty per cent. by smoking a single cigar, which was followed by a restless, sleepless night, although he is an old user of tobacco, having smoked it for a quarter of a century. Another patient, a young man of steady habits, and several years addicted to the use of the weed, has been obliged to forego its use for a like reason. The smoking of one cigar is sufficient to increase the rate of his pulse from eighty-five pulsations per minute to one hundred and twenty. This effect continues several days, more or less, and is so uniform with him that I can always detect his indulgence of the cigar by an ex-

amination of his pulse. In this patient, palpitation of the heart and shortness of breath are also frequent concomitants of tobacco-smoking.

Death from paralysis of the heart is not an uncommon effect of tobacco. Druhen relates that a youth, aged fourteen, "having smoked fifteen cents' worth of tobacco, as a remedy for toothache, fell down senseless, and died the same evening."* Blatin, also, relates similar incidents from the effect of tobacco. But the acute effects of the drug he regards as trifling compared to "the gradual saturation of the system with nicotine." "The trembling," says Mr. Axon, "which is one of the usual symptoms of acute, is also a common result of chronic, nicotism." He mentions the case of a distinguished Parisian physician, whose hands "shook so much that he could not write. Whenever he remained without tobacco for any length of time, these tremblings disappeared."†

Vertigo is another frequent concomitant of tobacco-using. Blatin mentions the case of a man who consulted him "respecting violent and numerous attacks of vertigo. When he felt one of them approaching he was obliged to lie down wherever he might be, in order to avoid falling. In the country, where he had plenty of exercise, they were less frequent than in the town, where his occupation was sedentary. Cessation from tobacco and a tonic regimen quickly restored him."‡ Numerous cases of similar nature and character have been recorded among the observations of medical men. If they are not sufficiently tragical to deter the lovers of tobacco from the habits of smoking

* Quarterly Journal of Science.

† Ibid.

‡ Ibid.

and chewing, they at least seem to prove the sphere of its physiological influence on the nervous system, and that of the heart particularly. Tobacco lowers the animal temperature; and if it soothes and comforts the weary toiler in the study, or in the workshop, it does so through its specific, medicinal effect upon the sympathetic ganglia, rather than by any influence in augmenting the vital energies of the nervous system. "Tobacco," observes Mr. Axon,* "adds no potential strength to the human frame. It may spur a weary brain or feeble arm to undue exertion for a short time, but its work is destructive, not constructive. It cannot add one molecule to the plasm out of which our bodies are daily built up. On the contrary, it exerts upon it a most deleterious influence. It does not supply, but diminishes, vital force."† And in concluding his interesting study of the habit, the writer pertinently affirms, that "it is in no case necessary or beneficial; it is a social nuisance; it is devoid of æsthetic beauty; it is an unmanly leaning on a solace to care and labor neither sought nor needed by the weaker sex; it is an enormous and yearly-increasing improvidence. Above all, it is the foe to youthful development, the bane of youthful blood and brain. The subject may seem to some too trivial for serious attention; but when we consider the extent of juvenile smoking, we see that the national life and stamina are seriously threatened by this ignoble habit."

The effect of tobacco on the moral powers is nowise less pronounced than it is on those of the more purely physiological.‡ The author of "The Uses and Abuses

* Quarterly Journal of Science.

† Ibid.

‡ Mr. Lewes, the clever author of "The Physiology of Common Life,"

of Tobacco," an Edinburgh professor of surgery, says, that "loss of memory takes place in an extraordinary degree in the smoker."* A colleague, whose opinion is influenced partly by the effect of the narcotic upon himself, believes that its excessive use impairs the memory. Another colleague who has studied the subject objectively, having no experience with the drug on himself, believes its long-continued use blunts in a degree the moral perceptions. And still another, whose opinion is entitled to respect, thinks its specific effects on the mind lie in the direction of the affectional or social propensities. Dr. Lizars, before quoted, thinks it produces cowardice.† Mr. Parton's opinion on the subject is well known. He says:‡ "We must

being disposed to find good in everything, makes tobacco no exception. He thinks a cigar a good digester, *taken after dinner*. But, he observes, it has "other influences, some beneficial, some injurious; the amount of injury depends on the nature of the organism; and therein each person must judge for himself. There is only one caution, which it is right to place before the reader. When tobacco is said not to be injurious, but beneficial, it must always be understood to mean tobacco in small quantities. Excess in tobacco is very injurious; so also is excess in alcohol; so also would be excess in mutton-chops. All excess is dangerous. All stimulants should be used sparingly. Yet the man who never thinks of exceeding his half a pint of wine or pint of beer daily makes no scruple of smoking a dozen cigars! From my own experience, rendered vigilant as I am by a delicate digestion and an easily-disturbed organism, I can conscientiously say that two cigars daily, always taken after, and never before, the chief meals, have proved themselves to be decidedly beneficial in many directions; but I should no more think of increasing that quantity than of increasing my daily quantity of coffee or beer. Other organisms could of course endure greater quantities. Each must determine the proper limit for himself; and having determined it, *abide* by it."—*Physiology of Common Life*, vol. i. p. 192.

* Dr. Lizars, p. 34.

† "I have invariably found that patients addicted to tobacco-smoking were in sentiment cowardly, and deficient in manly fortitude to undergo any surgical operation, however trifling, proposed to relieve them from the sufferings of other complaints."—*Ibid.*, p. 36.

‡ Smoking and Drinking, by James Parton.

admit, too, I think, that smoking dulls a man's sense of the rights of others." As he himself is a reformed smoker, surely his opinion is not without weight. My own study and observation of the chronic effects of tobacco have led me to believe that it impairs the moral perceptions, to a greater or less degree, and that it also perverts the social instincts. While it must be freely admitted that many good and excellent men smoke,—few such, I think, chew the "weed,"—it is believed that they would even be better than they are, were it not for the morally sedative influence of the drug; for it is undeniably true that tobacco in any form, not excepting the "fragrant Havana," is incompatible with the existence of the highest and finest characters.* The noblest types of manhood and womanhood generally have no affinity for the weed; indeed, I have seldom known a man, and *never* a woman, greatly distinguished for the high quality of his or her moral perceptions, who was an habitual, or even an occasional, user of tobacco.

The partisans of the smoking habit will find much in these views to dissent from. Mr. Bayard Taylor, whose observations on the subject are entitled to respect, having more than ordinary opportunities to test their soundness, says, that "its effect, when habitually used, is slightly narcotic and sedative, not too stimulating; or if so at times, it stimulates only the imagination and the social faculties. It lulls the combative and destructive propensities, and hence, so far as a material agent may operate, it exercises a human-

* The great Napoleon said of smoking, that "it is a habit only fit to amuse sluggards."—*The Uses and Abuses of Tobacco*, p. 86.

izing and refining influence." The effect upon himself, he observes, is a "delicious sense of rest." "The pure physical sensation of rest," he says, "is one of strength also, and of perfect contentment. Many an impatient thought, many an angry word, have I avoided by a resort to the pipe." But would not a glass of cold water have had a similar effect? Mr. Taylor is evidently a natural smoker, and finds no limit to the height and depth of the peculiar fascinations of the habit. "I know of nothing," he continues, "more refreshing, after the fatigue of a long day's journey, than a well-prepared narghileh. That slightly feverish and excitable feeling which is the result of fatigue yields at once to its potency. The blood loses its heat and the pulse its rapidity; the muscles relax, the nerves are soothed into quiet, and the frame passes into a condition similar to sleep, except that the mind is awake and active. By the time one has finished his pipe, he is refreshed for the remainder of the day, and his nightly sleep is sound and healthy. Such are some of the physical effects of the pipe in Eastern lands. Morally and psychologically, it works still greater transformations; but to describe them now, with the mouth-piece at my lips, would require an active self-consciousness which the habit does not allow."* Such, *I* should say, are some of the effects of tobacco on a highly-poetic temperament!

Now, if tobacco, even in ever so small a degree, promotes moral degeneracy, augments the power and influence of the propensities in the character, to that extent, at least, it has an evil tendency. This is a logical sequence of the facts, which are amply sup-

* The Lands of the Saracen, p. 182.

ported by trustworthy observation. The prolonged use of tobacco, Bayard Taylor to the contrary notwithstanding, certainly augments the importance of self,—the “I” in the character. It makes one more sensible of his own personal existence. His personal wants, desires, appetites, are increased in number and vigor. He is, therefore, less likely to forget himself in his zeal for the interests of others. He may be magnanimous still, but he grows less generous,—except, perhaps, with his tobacco. The tobacco user may be in straitened circumstances, and find it exceedingly difficult to make his ends meet, but not to keep the tobacco-box well supplied! The baby may be in extremest want of a pair of shoes, but *he* never wants for cigars or tobacco. The doctor’s bill may have laid in the drawer unpaid for months, or more,—frequently *more*,—but he does not forget to pay for the cigars, which he continues to puff with an ever-increasing satisfaction and delight. The wife and children may even want for the necessities of life,—for food and drink,—but still the husband chews or smokes,—finding tobacco apparently the chief necessity of *his* life. These facts are founded on personal observation. Do they not sustain the allegation that tobacco promotes the growth of selfism in man?

Moreover, it must be conceded that the habitual use of tobacco is destructive, in a greater or less degree (secondary effect), of moral equanimity. The majority of chewers and smokers are conscious of being held in dominion by a power they cannot break. They are restless and impatient under restraint. The merest trifles vex and annoy. In general they are less kind and sympathetic, more easily crossed and dispossessed,

—especially if temporarily deprived of their customary “solace.” They are inclined to be less respectful and self-respecting; less refined in manner, feeling, and expression. The better class of those who are addicted to the use of tobacco may not descend to actual vulgarity, but, in general, they do not refrain from joining heartily in the laugh it excites when uttered by others. They are also less respectful and appreciative of the character of woman, and are more inclined, through the influence of the drug it is believed, to regard her from the lower and more purely selfish considerations. Tobacco may soothe and comfort that morbid restlessness and irritability which is the forerunner and positive indication of nervous derangement, if not of actual nervous disease; but it certainly is a blight upon that quality of genuine gallantry which is the special adornment and glory of manhood.

These are obvious indications of a tendency to moral apathy and mental derangement, which may be justly attributed to tobacco. We know of no adequate compensation for these effects, except it be in restraining the appetite for substances, and the indulgence of habits, still more demoralizing; or of quieting morbid appetencies, hereditary or acquired, which, unchecked by some equally potent counteracting agent, would impel the individual into more disastrous ways. This explanation of the possible compensations of the habit is purely hypothetical; but whether true or false, it needs no marvelous powers of comprehension to understand that there can be no substantial, moral and intellectual health, so long as poisonous, and wholly inimical and vitiating, elements are necessary accessories of human blood and brain.

4. All through the East opium, tobacco, hasheesh, etc., have been largely used for centuries for the purpose of perverting the senses,—hasheesh particularly, to augment the power and luxury of the imagination. Bayard Taylor thinks he recognizes the agency of hasheesh in the production of such tales as the Arabian Nights, and in “the glow and luxury of all oriental poetry.” The same author observes, also, that an infusion of the dried leaves of the *cannabis indica* “is a more fierce and fatal stimulant than the paste of sugar and spices to which the Turk resorts, as the food of his voluptuous evening reveries. While its immediate effects seem to be more potent than those of opium, its habitual use, though attended with ultimate and permanent injury to the system, rarely results in such utter wreck of mind and body as that to which the votaries of the latter drug inevitably condemn themselves.”*

Mr. Taylor’s account of his own personal experiments with the hasheesh is as instructive as it is interesting. While at Damascus, during his oriental tour in 1852, that eminent tourist took, at a single dose, one teaspoonful of a strong infusion of the hasheesh, and after an interval of an hour took half as much more. He had not long to wait for characteristic symptoms:

“I was seated alone,” he writes, “nearly in the middle of the room, talking with my friends, who were lounging upon a sofa placed in a sort of alcove at the farther end, when the same fine, nervous thrill of which I have spoken suddenly shot through me.

* The Lands of the Saracen, pp. 133-4.

But this time it was accompanied with a burning sensation at the pit of the stomach ; and, instead of growing upon me with the gradual pace of healthy slumber, and resolving me, as before, in the air, it came with the intensity of a pang, and shot throbbing along the nerves to the extremities of my body. The sense of limitation—of the confinement of our senses within the bounds of our own flesh and blood—instantly fell away. The walls of my frame were burst outward and tumbled into ruin ; and, without thinking what form I were,—losing sight even of all idea of form,—I felt that I existed throughout a vast extent of space. The blood pulsed from my heart, sped through uncounted leagues before it reached my extremities ; the air drawn into my lungs expanded into seas of limpid ether, and the arch of my skull was broader than the vault of heaven. Within the concave that held my brain were the fathomless deeps of blue ; clouds floated there, and the winds of heaven rolled them together, and there shone the orb of the sun. . . . In the state of mental exaltation in which I was then plunged, all sensations, as they arose, suggested more or less coherent images. They presented themselves to me in a double form : one physical, and therefore to a certain extent tangible ; the other spiritual, and revealing itself in a succession of splendid metaphors. The physical feeling of extended being was accompanied by the image of an exploding meteor, not subsiding into darkness, but continuing to shoot from its centre or nucleus—which corresponded to the burning spot at the pit of my stomach—incessant adumbrations of light, that finally lost themselves in the infinity of space. To my mind, even now, this image is still the best illustration of

my sensations, as I recall them; but I greatly doubt whether the reader will find it equally clear.

"My curiosity was now in a way of being satisfied; the spirit (demon, shall I not rather say?) of hasheesh had entire possession of me. I was cast upon the flood of his illusions, and drifted helplessly whithersoever they might choose to bear me. The thrills which ran through my nervous system became more rapid and fierce, accompanied with sensations that steeped my whole being in unutterable rapture. It was accompanied by a sea of light, through which played the pure, harmonious colors that are born of light. While endeavoring, in broken expressions, to describe my feelings to my friends, who sat looking upon me incredulously,—not yet having been affected by the drug,—I suddenly found myself at the foot of the great Pyramid of Cheops. The tapering courses of yellow limestone gleamed like gold in the sun, and the pile rose so high that it seemed to lean for support upon the blue arch of the sky. I wished to ascend it, and the wish alone placed me immediately upon its apex, lifted thousands of feet above the wheat-fields and palm-groves of Egypt. I cast my eyes downward, and, to my astonishment, saw that it was built, not of limestone, but of huge square plugs of cavendish tobacco! Words cannot paint the overwhelming sense of the ludicrous which I then experienced."

After writhing now "in an agony of laughter," this scene melted away, to be followed with another of such gorgeousness that he despaired "of representing its exceeding glory."

"I was moving over the desert," he continues, "not upon the rocking dromedary, but seated in a bark

made of mother-of-pearl, and studded with jewels of surpassing lustre. The sand was of grains of gold, and my keel slid through them without jar or sound. The air was radiant with excess of light, though no sun was to be seen. I inhaled the most delicious perfumes; and harmonies, such as Beethoven may have heard in dreams but never wrote, floated around me. The atmosphere itself was light, odor, music; and each and all sublimated beyond anything the sober senses are capable of receiving. Before me—for a thousand leagues, as it seemed—stretched a vista of rainbows, whose colors gleamed with the splendor of gems,—arches of living amethyst, sapphire, emerald, topaz, and ruby. By thousands and tens of thousands they flew past me, as my dazzling barge sped down the magnificent arcade; yet the vista still stretched as far as ever before me. I reveled in a sensuous elysium, which was perfect, because no sense was left ungratified. But, beyond all, my mind was filled with a boundless feeling of triumph. My journey was that of a conqueror,—not of a conqueror who subdues his race, either by love or by will, for I forgot that man existed, but one victorious over the grandest as well as the subtlest forces of nature. The spirits of light, color, odor, sound, and motion were my slaves; and, having these, I was master of the universe. . . . Those finer senses, which occupy a middle ground between our animal and intellectual appetites, were suddenly developed to a pitch beyond what I had ever dreamed, and being thus at one and the same time gratified to the fullest extent of their preternatural capacity, the result was a single harmonious sensation, to describe which human language has no epithet.

Mahomet's paradise, with its palaces of ruby and emerald, its airs of musk and cassia, and its rivers colder than snow and sweeter than honey, would have been a poor and mean terminus for my Arcadia of rainbows."

During these beautiful illusions, our author was quite conscious of his precise whereabouts, and of the fact that all these gorgeous fancies were the effects of hasheesh. "Yet, singular as it may seem," he remarks, "neither conflicted with the other. My enjoyment of the visions was complete and absolute, undisturbed by the faintest doubt of their reality; while, in some other chamber of my brain, reason sat coolly watching them, and heaping the liveliest ridicule on their fantastic features. One set of nerves was thrilled with the bliss of the gods, while another was convulsed with unquenchable laughter at that very bliss. My highest ecstasies could not bear down and silence the weight of my ridicule, which, in its turn, was powerless to prevent me from running into other and more gorgeous absurdities. I was double, not 'swan and shadow,' but rather, sphinx-like, human and beast. A true sphinx, I was a riddle and a mystery to myself."

The full effect of the massive dose had not yet been reached. Thus far the illusions had been highly pleasing and enjoyable; but the more serious and suffering symptoms came on apace:

"My perceptions now became more dim and confused. I felt that I was in the grasp of some giant force; and, in the glimmering of my fading reason, grew earnestly alarmed, for the terrible stress under which my frame labored increased every moment. A

fierce and furious heat radiated from my stomach throughout my system; my mouth and throat were as dry and hard as if made of brass, and my tongue, it seemed to me, was a bar of rusty iron. I seized a pitcher of water, and drank long and deeply; but I might as well have drunk so much air, for not only did it impart no moisture, but my palate and throat gave me no intelligence of having drank at all. I stood in the centre of the room, brandishing my arms convulsively, and heaving sighs that seemed to shatter my whole being. 'Will no one,' I said, in distress, 'cast out this devil that has possession of me?' I no longer saw the room nor my friends. . . .

"By this time it was nearly midnight. I had passed through the paradise of hasheesh, and was plunged at once into the fiercest hell. . . . The excited blood rushed through my frame with a sound like the waves of mighty waters. It was projected into my eyes until I could no longer see; it beat thickly in my ears, and so throbbed in my heart that I feared the ribs would give way under its blows. I tore open my vest, placed my hand over the spot, and tried to count the pulsations; but there were two hearts, one beating at the rate of a thousand beats a minute [a poet's license], and the other with a slow, dull motion. My throat, I thought, was filled to the brim with blood, and streams of blood were pouring from my ears. I felt them gushing warm down my cheeks and neck. With a maddened, desperate feeling, I fled from the room, and walked over the flat, terraced roof of the house. My body seemed to shrink and grow rigid, as I wrestled with the demon, and my face to become wild, lean, and haggard. . . . Involuntarily, I raised

my hand to feel the leanness and sharpness of my face. Oh, horror! the flesh had fallen from my bones, and it was a skeleton head that I carried on my shoulders! With one bound I sprang to the parapet, and looked down into the silent court-yard, then filled with the shadows thrown into it by the sinking moon. Shall I cast myself down headlong? was the question proposed to myself; but though the horror of that skeleton delusion was greater than any fear of death, there was an invisible hand at my breast which pushed me away from the brink."

These pitiable sufferings went on without abatement for several hours. And in addition to them was the consciousness of being possessed by a demon, against which he struggled with all the powers of his enfeebled will; and as it "became gradually weaker," he observes, "I felt that I should soon be powerless in his hands." By-and-by a painful state of "gray blank oblivion" came on, lasting some thirty hours; after which a warm bath and a glass of acid sherbet put the reckless experimenter in the way of speedy convalescence. For a long time our author remained broken in spirit, and deprived of sufficient energy to prosecute the objects of his journey. "Yet," he writes, "fearful as my rash experiment proved to me, I did not regret having made it. It revealed to me deeps of rapture and of suffering which my natural faculties never could have sounded. It has taught me the majesty of human reason and of human will, even in the weakest, and the *awful peril of tampering with that which assails their integrity*. I have here faithfully and fully written out my experience, on account of the lesson which it may convey to others. If I have

unfortunately failed of my design, and have but awakened that restless curiosity which I have endeavored to forestall, let me beg all who are thereby led to repeat the experiment upon themselves, that they be content to take the portion of hasheesh which is considered sufficient for one man, and not, like me, swallow enough for six."*

In finally concluding this chapter, we cannot forbear to do justice to the intuitional and theological conceptions of our forefathers, and those of many of our contemporaries, who regarded, and do now regard, many forms of nervous derangement as the result of "demoniacal possession." When we reflect upon the multitude of morbid derangements that may be engendered in the mind by agents, the use of which a multitude of perverted instincts have rendered fashionable and imperative; and the various mental disorders that may be and are artificially produced by narcotics, and other agents of similar morbid nature, which are so largely consumed in some form or other by man, the possibility of "demoniacal possession" seems highly plausible, and by no means incredible. During the seventeenth and eighteenth centuries, in many parts of Spain, France, and Italy, epidemics of nervous disorders frequently occurred in various provinces, chiefly among the nuns, but the priests and exemplars were by no means exempt from the baleful influence. They were treated with Bibles and crucifixes, thumb-screws and fagots, on the presumption of their demoniacal origin. The treatment might have been improved upon, surely, but the cause and nature

* The Lands of the Saracen, chap. x.

of the disorder were certainly not altogether misapprehended. The victims of the "possession" occupied ill-ventilated rooms, in over-crowded, vitiated apartments. The institutions themselves were surrounded by an atmosphere of malaria. The inmates were closely secluded from sunlight and pure air; used impure water and unwholesome food in deficient and capricious quantities. Their minds were continually occupied with the super-sensuous; their natures dwarfed and impoverished by being deprived of the vital stimulus of society and general social and industrial recreation. Under such circumstances, the blood of the unfortunates must necessarily have become foul; poisoned, intoxicated with various noxious and demoralizing agents, engendered and absorbed, which, ascending to the brain through the medium of the circulation, were absorbed into its substance, and became substantial constituents of the delicate nerve-cells and centres of thought and feeling. Thus were their functions perverted, or *possessed*, so to speak, and the individuals impelled to exhibit conduct the most strange and extraordinary, but at the same time, spontaneous and wholly irresponsible. That they should have felt themselves "possessed" by the devil, or some other evil genii, is not at all strange, for they were, in fact, possessed not merely by one, but by many devils, far more vicious and vitiating than he of the horns and cloven hoofs!

NOTES ON ALCOHOL.—Page 70.

Pereira has classed alcohol among the alimentary principles, in view of Liebig's hypothesis that it is burnt in the lungs as fuel, and in that way ministers to the maintenance of the animal temperature. But he observes: "By itself it cannot form tissues, since it is deficient in some of their essential ingredients, namely, nitrogen, sulphur, and phosphorus; and there is no reason to suppose that it contributes, even in part, to the renovation of the tissues. . . . By its oxidation in the lungs it must evolve caloric, and thus, when used in moderation, it serves to support the temperature of the body."—*Food and Diet*, pp. 25–6.

Liebig says that, "if we hold that increase of mass in the animal body, the development of its organs, and the supply of waste,—that all this is dependent on the blood, that is, on the ingredients of the blood, then only those substances can properly be called *nutritious*, or considered as food, which are capable of conversion into blood."—*Organic Chemistry*.

Professor C. A. Lee remarks: "That animal heat is promoted to any extent by the combustion of alcohol in the lungs we think still more questionable, for experience has proved that, other things being equal, a person will perish sooner when exposed to severe cold, if he uses alcoholic drinks, than if he entirely abstains from them. . . . There is, it is true, a popular delusion on this subject, for if 'coachmen and others take alcoholic drinks in cold weather to keep them warm,' they also take them in hot weather to keep them cool; but in neither case can the custom be quoted as an argument in favor of such use, or of the

justness of the views on which such views are founded.”
—*Note 2 to Pereira's Food and Diet.*

Dr. Benjamin Rush says: “There cannot be a greater error than to suppose that spirituous liquors lessen the effects of cold on the body. On the contrary, they always render the body more liable to be affected and injured by the cold.”—*Medical Inquiries.*

Sir John Ross, whose experience in the Arctic regions should give weight to his opinion, testifies: “When men under hard and steady labor are given their usual allowance or draught of grog, or a dram, they become languid and faint, losing their strength in reality, while they attribute that to the continuance of their fatiguing exertions.”—*From Food and Diet*, p. 269.

Dr. W. B. Carpenter observes: “That the capacity of the healthy human system to sustain as much bodily or mental labor as it can be legitimately called upon to perform, and its power of resisting the extremes of heat and cold, as well as other depressing agencies, are not augmented by the use of alcoholic liquors; but that, on the other hand, their use, under such circumstances, tends positively to the impairment of that capacity.”—*Alcoholic Liquors*, p. 19.

Lewes, on the other hand, says: “If it (alcohol) be not food, neither, then, is sugar food, nor starch, nor any of those manifold substances employed by man which do not enter into the composition of his tissues. That it produces poisonous effects when concentrated and taken in large doses is perfectly true; but that similar effects follow when *diluted*, and taken in small doses, is manifestly false, as proved by daily experience.”—*Physiology of Common Life*, vol. i. p. 115.

Moleschott, an eminent German physiologist, is quoted by Lewes in support of the latter's views: "He who has a little can give but little, if he wish to retain as much as one who is prodigal of his wealth. Alcohol is the savings-bank of the tissues. He who eats little, and drinks alcohol in moderation, retains as much in his blood and tissues as he who eats more, and drinks no alcohol."—*Lehre der Nahrungsmittel*, p. 162. After all this assurance, respecting the conserving properties of alcohol, Mr. Lewes concludes that "the physiological action of alcohol is still unexplained!" and most people will agree with him.

CHAPTER III.

THE RECIPROCAL INFLUENCES OF CORPOREAL AND MENTAL EXERCISE.

IN a previous chapter we have shown how the very fountain of thought and feeling may be perverted by means of various physical agents and influences operating on the brain chiefly through the medium of the blood. Specific influences of that order act more vitally upon the brain and mental processes than agents or influences of a moral nature; since with the best of mental discipline, and the happiest moral surroundings, if the blood be disordered, the brain and mind may soon succumb to infirmity.

It is no longer a debatable question among any class of thinkers, or people of any phase of religious or theological belief, that the brain comprehends a congeries of organs, each invested with or manifesting a special psychical function of its own. "Most physiologists," says Dr. Andrew Combe,* "are agreed that the different parts of the brain perform distinct functions, and that these functions are the highest and most important in the animal economy. . . Further, by nearly universal consent, the brain is held to be also the seat of the passions and moral feelings of our nature,

* The Principles of Physiology, p. 212.

as well as of consciousness and every other mental act." In the finely-endowed human being, these special organs and nerve-centres, comprising the heart and intellect of the theological system, are presumed to sustain definite proportions of strength and activity to each other. The character is thus enabled to present and maintain that high degree of order and consistency, in its relations to itself and to external nature, for which the true man, above every other creature, is so divinely distinguished. For a similar reason, serious disproportion in the development of these psychical powers of mind and heart results in bringing the individual into serious conflict and opposing relations with external nature, and the forms and usages which society establishes for the guidance and control of its members. Mental training, therefore, comprehends all the means, of whatever nature, by which the normal balance and activity of the mental faculties and propensities may be promoted and preserved; so that no organ or single group of organs, or psychical powers, shall gain, or possess undue influence or ascendancy in the character.

Commencing then with exercise, we have to observe that in accomplishing this end it is of no small moment, in physical and mental training, to preserve the proper balance in the development of the bodily powers and the mental faculties.* In reacting from the former custom of overstraining the mental powers, the

* "The brain, being an organized part, is subject, in so far as regards its exercise, to precisely the same laws as the other organs of the body. If it be doomed to inactivity, its health decays, and the mental operations and feelings, as a necessary sequence, become dull, feeble, and slow."—*Combe's Principles of Physiology*, etc., p. 21.

tendency of the last half-century has been to go to the opposite extreme,—to develop the body at the expense of the mind. 'Tis a grave evil, and tends to put back the moral progress of the age. Body and mind being an inseparable unit, limited in its constitutional elements and resources, nourished from a common source—the blood, it must needs follow that if the former absorb more than its proper proportion, the latter is inevitably robbed of its rightful share. The inevitable corollary of excessive corporeal training is, therefore, to render unduly weak and atrophic the organs of the cerebrum, whose strength and activity are, perhaps, the very *sine qua non* of moral and intellectual excellence. Long experience in the observation of human nature must convince any one that the *will*, however strong, is impotent to reform defects of character which depend upon an organic or constitutional bias, whether congenital or acquired. Moreover, in mental disease the will itself is often subject to perversions quite as radical and constitutional as those which afflict the other mental powers; and however apparently free its decisions and determinations appear, they can easily be shown, in most instances, to be in strict accord with antecedent influences, and as far as possible from being the result of independent volition. The will is more often a wreck in the torrent of human impulses; adding no element of strength and cohesion to the moral character, but drifting helplessly in the current of phenomenal sequences. How impotent, then, must often be appeals to the will for moral changes and reforms! Appeals against the rolling of the tempest's waves, or the flames of the devouring element, would be equally consistent and quite as effectual. There is

no assurance, there can be none, that the character can be moulded into forms approximating ideal beauty and perfection by any methods that do not comprehend the harmonious balance of the faculties and powers, by the mutual exercise of each in its own sphere and upon its own object.

The principle is amply illustrated in daily life. Among average people, great corporeal and mental powers are seldom—I may say never—observed in the same individual. If one is extraordinary, the other is below mediocrity. Strong muscular development and weak cerebra, or strong cerebra and weak muscles, are the rule,—the reverse is the exception. Dr. Winship, by long and tedious training, succeeded in lifting three thousand pounds: the energy of his higher mental faculties is said to have become greatly impaired by the extraordinary accomplishment; unless, indeed, he were a Hercules in vital resources, it could not be otherwise. The pugilist, who is distinguished for muscle, is never famous for brains. The celebrity in letters is notoriously deficient in muscular agility and development. The physical athlete, who surprises the world with wondrous feats of physical endurance in walking, rowing, boxing, wrestling, running, etc.; the gymnast, or acrobat, who executes those wonders of physical achievements in climbing, jumping, balancing, summersaulting, and the various other monkeyisms to be seen in any first-class gymnastic establishment; the sportsman, who rivals his fellows in cricket, base-ball, billiards, ten-pins, etc., all and singular, do so by the development of a physical prowess achieved at the expense of the superior powers. However much

such accomplishments may contribute to the pleasures of existence,—to promote symmetry of size, form, and movement,—they are, at the best, advantages confined to the animal plane. Man's noblest achievements would seem to lie in the direction of the moral and intellectual faculties, in evolutions which widen the distance between him and the purely animal. Surely, these do not consist in perfecting himself in those accomplishments wherein, try he never so hard, the monkey will always be his rival; but, rather, in those acquirements of mind and heart which only a *man* can achieve. Those who have imbibed the foolish ambition to excel in physical development would do well to remember that a brilliant success means an ignominious defeat in the attainment of the more purely human characteristics. This law of the mutual interchange, correlation, of corporeal and mental forces, underlies the achievement of extraordinary success in any direction of individual effort, either of body or of mind. Its operation is certainly least desirable when the former is exalted at the expense of the latter.

It by no means follows from this position that the less indulgence in manual exercise the better it is for the activity of the mind. On the contrary, the mind's highest vigor and usefulness depend on a due amount of physical exertion and recreation. It is to be regretted that no definite rule can be given to determine the amount of physical exercise that is, in some shape or other, requisite for the best mental condition. The amount widely differs with the age, temperament, sex, condition, and previous habits of different individuals. Some need more, others less; but all require a sufficient amount to secure harmony of organic develop-

ment, and to keep the physical and mental constitution in good, healthy, vigorous condition. "Exercise," says Mr. Graham, "is the most important natural tonic of the body. It serves to impart vigor and activity to all the organs, and to secure the healthy integrity and energy of all the functions, and the symmetrical development and constitutional power of the whole system; and gives strength and agility, elasticity and grace to the body, and energy and activity to the intellectual and moral faculties."*

While it is no part of my object, then, to undervalue the importance of corporeal exercise and training as an indispensable adjuvant of human culture, and as one of the primary conditions of physical excellence, without which no mind can be truly sound, it is nevertheless desirable, conformable to the laws of natural order, that muscular training should be confined to its true sphere in the civilization of the age. It must not be forgotten that the age of muscle is passing away, and in its place comes the higher one of nerve and brain. Steam and electricity on the one hand, and mechanical inventions on the other, are superseding the necessity for the stalwart frames and heavy sinews which were in such prime demand a few years since. Within my memory canals were dug with the shovel and pick-axe; railroads built by hand, with all the rough labor of excavating tunnels and filling up the roadways. The hard, manual work of the shop and farm was likewise done by arms made strong by ceaseless toil. Even the delicate work of the most skilled mechanic was, until recently,

* Science of Human Life, sec. 1619.

accomplished by fingers, which only long years of patient application and drilling could render efficient. It is not long since migration was essayed on foot, with bag and baggage borne on backs which, had they not been trained to hardihood, must have broken and failed under the burden. Within the memory of this generation the pack-horse and stage-coach, ruder forms of muscle, were indispensable accessories of civilization. And not much farther back in the present century, forests were felled single-handed; rude homes constructed in like manner; wildernesses tamed into gardens, and fortunes wrung from the rugged earth by physical prowess, that are now engineered by implements of mechanical ingenuity, without labor or other devices save that of the brain and its mechanical creations. When the brain and nervous energies, backed by creations of mechanical art and skill, assume the countless tasks so long performed by human hands, propelled by hardy muscles, under the impetus of hardier wills, we may be pardoned for questioning the wisdom of continuing to maintain that degree of muscular development, which obtained among our forefathers, as a necessity of a civilization which no longer exists. That civilization required brain to minister to muscle; this civilization has reversed the order, and demands muscle to minister to brain in the development of the finer and nobler energies of a newer era.*

* "The age of the quadruped is to go out,—the age of the brain and of the heart is to come in. The time will come when the evil forms we have known can no more be organized. Man's culture can spare nothing, wants all the material. He is to convert all impediments into instruments, all enemies into power. The formidable mischief will only make the more useful slave. And if one shall read the future of the race hinted in the organic effort of nature to mount and meliorate, and the corresponding im-

Manual exercise, therefore, should be regarded as an adjuvant to moral culture and mental excellence, since it is no longer required in subjugating rude nature nor in doing the rough work of human industry. Corporeal exercise should minister to mental digestion and assimilation; to the development of stronger nerves and minds; to the growth of finer organizations and higher mental attributes. If to this end the gymnast swings his clubs and climbs his ropes and poles; the athlete balances his weights, walks, lifts, or runs; the oarsman plies his oars; the jockey trains his horse; the soldier drills or parades; the mechanic works at his lathe or bench, or engages in cricket or base-ball; the husbandman, or woman, cultivates the earth, sows and reaps, raises stock, or engages in other forms of productive industry,—it is all very well. Then will there be no fear that proficiency in any of these exercises and industries will be pushed to a degree inconsistent with the ascendancy of the mental arts and accomplishments of an advancing civilization.

It has already been intimated that mental symmetry depended upon the symmetrical development of the mental faculties. Inordinate activity of one disposes to depression or defect in another: the result is to develop incongruities and angularities in the character, quite fatal to order and consistency, or to a high degree of usefulness. "In order to maintain the highest degree of mental vigor," says Dr. Ray,* "it is neces-

pulse to the better in the human being, we shall dare affirm that there is nothing he will not overcome and convert, until at last culture shall absorb the chaos and gehenna. He will convert the Furies into Muses, and the hells into benefit."—*Emerson on Culture*.

* Mental Hygiene, p. 140.

sary that every power which nature has bestowed shall have its rightful share of influence in the habitual experience of the individual."* This is the true end and object of a sound education, and is as important to virtue as it is to health. If it were folly to suppose that the body could be in good physical condition with some of its organs or tissues diseased or defective, it were equal folly to suppose that the brain, or the mind, could be sound with some of its organs or faculties in a defective, unsound, or undeveloped state.

Moreover, the want of this mental balance, or symmetry, leads directly to disease and crime. Undue activity of one mental function tends to increase and perpetuate its influence, and to deprive other organs, already enfeebled by disuse, of their due amount of stimulus.† If it be the passions which have acquired

* "A passionate man is not strong-minded; nor do the ravings of insanity reveal mental vigor. A completely fashioned will is the true mark of a strong mind. As in the order of natural development there has been an ascent from the physical and chemical forms to the aim-working, vital force, and thence from the lowest vitality to the highest manifestation thereof, so in the course of mental development there is a progress through sensation, passion, emotion, reason, to the highest plane of mental force,—a well-fashioned will. The rightly developed mind, like the healthy cell, recognizes its relations to others; self-feeling gives way to, or expands into, moral feeling, and in the will all the phases of consciousness are co-ordinated into calm, just, definite action."—Maudsley's paper on *The Theory of Vitality*, Appendix to his *Body and Mind*, p. 154.

† "'A perfect mind in a perfect body,' says Mr. Lecky, 'was the ideal of the [Greek] philosopher, and the latter was considered almost a condition of the former. Harmonious sustained manhood, without disproportion, or anomaly, or eccentricity—that godlike type in which the same divine energy seems to thrill with equal force through every faculty of mind and body, the majesty of a single power never deranging the balance or impairing the symmetry of the whole,—was probably more keenly appreciated and more frequently exhibited in ancient Greece than in any succeeding civilization.'"—*History of Rationalism in Europe*, vol. ii. p. 351.

this unnatural ascendancy, the consequence is most deplorable upon the moral character. A condition is developed which needs only exciting causes to throw the individual into uncontrollable paroxysms of insane anger, or render him a prey to a variety of morbid impulses which he has neither the wish nor the power to control.

Mr. Emerson, in one of his trenchant essays bearing upon this subject, forcibly observes :* "There is an intimate interdependence of intellect and morals. Given the equality of two intellects, which will form the most reliable judgments, the good or the bad hearted ? 'The heart has its arguments, with which the understanding is not acquainted.' For the heart is at once aware of the state of health or disease, which is the controlling state,—that is, of sanity or of insanity, prior, of course, to all question of the ingenuity of arguments, the amount of facts, or the elegance of rhetoric. So intimate is this alliance of mind and heart, that talent uniformly sinks with character. The bias of errors of principle carries away men into perilous courses, as soon as their will does not control their passion or talent. Hence the extraordinary blunders, and final wrong head, into which men, spoiled by ambition, usually fall. Hence the remedy for all blunders, the cure of blindness, the cure of crime, is love. 'As much love, so much mind,' said the Latin proverb. The superiority that has no superior ; the redeemer and instructor of souls, as it is their primal essence, is love."

It will be observed that I am stating an hypothesis

* The Conduct of Life, pp. 189-90.

founded on physiological and mental science. In actual life such cases are by no means hypothetical. The late monstrosity in human form, the unhappy Ruloff, who lately expiated his crime on the gallows, is an illustration in point. Dissection of his brain demonstrated inordinate strength and activity of both the passions and the intellect; while conscience and the moral brain, in general, were singularly defective. Occurrences of the kind, though happily not of degree, are too numerous to mention. They may be observed everywhere, and in every degree or state of development, from the slightly eccentric individual to him who steals your purse, embezzles the public funds, outrages private decency, or assassinates a fancied enemy. No healthy or normally developed individual could be tempted by the most orthodox devil in Christendom to commit either of these acts, or any of the various other nameless misdemeanors which disgrace modern society.

It must be conceded, then, that no individual can justly be supposed to be mentally sound, and in the normal enjoyment of his mental being, who has one faculty undeveloped, one talent unimproved. The grand difference between a great man and a small one—between a Bacon and most of his pupils; or a Cullen and a Brown; or a Greeley and an ordinary man—is in the power and activity of his superior faculties. Every man and every woman may be presumed to be the equal of every other man and woman, in so far as the mere possession of the various mental elements can contribute to that equality. In that respect the Creator has been absolutely just to every human being. Man diverges from nature and equality into genius or medi-

ocrity just at this point, according as his superior powers develop or remain in a rudimentary or an unbalanced state.

Moreover, while atony of the superior faculties disposes to disease and crime by supplying the requisite mental conditions, viz. the preponderance of the animal over the human powers, activity in them promotes health and the general well-being. The hardest thinkers are healthier, happier, and longer lived than any other class. According to statistical records, philosophers and statesmen head the list of long-lived people. Von Humboldt, the greatest naturalist of the nineteenth century, though living in defiance of the recognized laws of health, retained the fullness of his intellect until the age of ninety. Buffon, the most celebrated French naturalist of the last century, died at eighty-one. Lord Bacon, the philosopher, took cold in one of his experiments and died at sixty-five. Cavendish, the brilliant chemist and physicist of the last century, although a bachelor,—a state not especially conducive to longevity,—reached the ripe age of seventy-nine. Lord Brougham died in harness at above the age of ninety. Our own beloved Irving, though not a physicist, yet distinguished in letters, died in 1859, at the advanced age of seventy-six, retaining his intellect unimpaired. The immortal Franklin lived and labored until the age of eighty-four; “his faculties and affections were unimpaired to the last.” Hahnemann, the founder of the system of therapeutics known as homœopathy, although a physician, was even more a philosopher, had a child born to him at the ripe age of eighty, and did not attain to the full zenith of professional prosperity until after that age. He died at eighty-eight,

in the vigor of his faculties, having experimented upon himself in testing the pathogenetic properties of drugs to a greater extent than any previous physicist. Sir Isaac Newton, than whom no man was a closer or a more conscientious student, published a new edition of his greatest work, the "*Principia*," in his eighty-fourth year. He died soon after, 1727,—his faculties undimmed to the last. Dr. Johnson, the celebrated savant and *littérateur*, died at seventy-five. "The illustrious Lord Mansfield died at the advanced age of eighty-nine, in full and unclouded vigor of intellect."*

In this category, and as an American parallel of Lord Mansfield, may be included the Hon. Horace Binney, of Philadelphia, who for more than half a century was very generally regarded as standing at the head of the American bar. The amount of professional labor which Mr. Binney performed during that long period must have been well-nigh herculean; of him the late Chief Justice Marshall declared, that "no man excelled him in knowledge of the great science of jurisprudence;" an opinion strengthened and confirmed by Daniel Webster, who added that "not only was he unexcelled, but unequalled in all the qualities that constitute a great lawyer and model man." This venerable citizen is still living, at the age of ninety-five, with an intellect unclouded and unimpaired, and furnishes an illustrious example of the endurance the mind is capable of when well-balanced and sustained by good health and generous impulses.

French savants are not behind the English in ex-

* Winslow's *Obscure Diseases of the Brain and Mind*, p. 552.

amples of remarkable longevity. Cardinal de Fleury was prime minister of France from the age of seventy to ninety. The beautiful and accomplished Madame Récamier retained many of her charms at an advanced age,—dying at seventy-two. Fontenelle was secretary of the French Academy of Science for many years, resigning on account of ill health at the age of eighty-three. He died in 1757, in his one hundredth year. Voltaire, the greatest *littérateur* of a brilliant literary age, the eighteenth century, after passing through various vicissitudes of social fortune, died at Paris in his eighty-fifth year, with an intellect unclouded till the last. "I die," said he, "worshiping God, loving my friends, not hating my enemies, but detesting superstition."* Richelieu reached the age of ninety-three, and died "full of mental vigor." M. Leroy at the age of one hundred "composed a remarkably beautiful and spirited poem." While all philosophers and statesmen do not reach the age of eighty years, it is undeniably true that a majority of such as have greatly distinguished themselves in science and literature have reached advanced age, proving that the very highest mental discipline is not inimical to good health and long life.

Among men distinguished for special gifts, as music, sculpture, painting, poetry, etc., the record of longevity points unmistakably to the same conclusion. It is a common error to suppose that the poetic temperament is unfavorable to mental soundness and old age. The instances, unhappily too numerous, on which this error is based, have been among the class who began life

* New American Encyclopædia, art. Voltaire.

with unsound conditions, and who wrote, for the most part, under the inspiration of a fitful and disordered imagination. Byron's hereditary infirmities are well known; and if he died young it was surely through faults not wholly his own, for his father died of dissipation, and his mother, a woman of ungovernable temper, was early destroyed by a fit of anger. Burns died at the age of thirty-eight, of intemperance; and Cowley was swept off the stage of life in a drunken fit, at forty-nine. Poets, less brilliant perhaps, but with equally strong imaginations, when not stricken with disease, have ripened into old age. The venerable Bryant still indulges his muse, and prosecutes, also, editorial labors, at the extraordinary age of seventy-eight. The celebrated author of "*Faust*" retained remarkable powers of intellect at eighty,—and died at eighty-three. Chaucer reached the age of seventy-two. Gosse is said to have composed a *Te Deum* at the age of seventy-eight. Cherubini was brilliant at eighty; and Corneille exhibited no decay of intellectual powers at seventy. The American portrait painters, Charles, and his son Rembrandt, Peale, died at advanced ages,—the father at eighty-six, the son at eighty-two. And Thomas Sully, a celebrity of the same profession, only recently deceased, at the remarkable age of eighty-nine, prosecuted his calling until almost the very last day of his life, and would doubtless have continued to do so several years longer except for the misfortune of an accident, whereby his labors were abruptly terminated. Titian, "the greatest painter of the Venetian school," continued his labors until the age of ninety and upwards, and finally died of the plague at ninety-nine. Benjamin West painted his last important picture,

"Death on the Pale Horse," when he was seventy-nine. He died in London in 1820, with a mind unclouded, at the advanced age of eighty-two. Handel, the celebrated musical composer, died at seventy-five. Those great German geniuses and musical composers, Mendelssohn and Beethoven, inherited infirm constitutions and died of disease at middle age. Haydn, one of the greatest musical composers of the last century, retained his genius till the age of seventy-seven. Mozart, his predecessor, succumbed to disease at sixty-seven. Our own venerable musical composer and writer, the late Dr. Lowell Mason, reached his eightieth year.

Distinguished sculptors are equally remarkable for their years. The American Powers, of "Greek Slave" celebrity, recently deceased, was chiseling away at the age of sixty-seven. Thorwaldsen, the eminent and beloved Danish sculptor, died suddenly of heart-disease at the age of seventy-four; leaving much unfinished work in his studio, among the rest a statue of Luther. His no less distinguished and admired Italian contemporary, Canova, also succumbed to disease at the age of sixty-seven. He evidently hoped to live many years longer, judging by the amount of unfinished work he left behind. These examples of longevity among students of art, philosophy, and literature tend strongly to sustain the position assumed.

According to statistics lately published in this country, the average duration of the lives of philosophers and physicians is sixty-eight years. The clergy rank next in longevity; lawyers next; while the class of people whose occupation is usually regarded in the highest degree health-promoting, the farmer, barely

reaches an average of fifty years!*

Causes of an obviously depressing nature, as improper diet and overwork in extremes of heat and cold, undoubtedly contribute to this result. But the general neglect of intellectual and moral culture, and the consequent disproportionate development of the muscular system among that class, are the chief exciting causes of their premature decline. "A partial cultivation of the mental faculties," says Dr. Ray, "is incompatible, not only with the highest order of thought, but with the highest degree of health and efficiency. The results of professional experience fairly warrant the statement, that in persons of a high grade of intellectual endowment and cultivation, other things being equal, the force of moral shocks is more easily broken, tedious and harassing exercises of particular powers more safely borne, than in those of an opposite description; and disease, when it comes, is more readily controlled and cured."† The general health of the poor and unlettered is certainly below that of the average of the more cultivated and affluent classes; and if old age is attained by them, they are more likely to lose their faculties by brain-softening, and end their days in imbecility.

"It is a fallacy," says Winslow,‡ "to suppose that the duration of life is shortened by literary pursuits. The great philosophers of antiquity—men whose minds were ardently engaged in the acquirement of knowledge and the pursuit of truth—were long-lived. . . . Blumenbach, the distinguished physician and naturalist, states that for the long period (exceeding half a

* I write from memory, but these figures are believed to be correct.

† Mental Hygiene, p. 149.

‡ Body and Mind, pp. 61-2.

century) he was associated with the most celebrated European universities, he did not witness a solitary example of any youth falling a victim to his ardor in the pursuit of intellectual distinction; and Eichhorn, one of the most voluminous writers of the day, the eminent philologist and historian, is said boldly to affirm that no one ever died of hard study. The idea is preposterous. 'A man may fret himself to death over his books, or anywhere else; but literary application would tend to diffuse cheerfulness, and rather prolong than shorten the life of an infirm man.'" This is, certainly, putting the case strongly, and must be regarded as an extreme statement of a sound principle.

Dr. Caldwell, an American physician of some repute in the beginning of the present century, and author of an able treatise on "Physical Education," observes,* that "the influence of strong and well-cultivated moral and intellectual organs on the general health of the system is soothing and salutary; and feeds and strengthens it, instead of ruffling and wearing it out. Compared to the influence of the organs of passion, it is as mild and wholesome nourishment contrasted with alcohol; or like the genial warmth of the spring and autumn with the burning heat of summer. Life and health and comfort may last long under the former, while all is parched and withered by the latter. Finally, a well-cultivated and well-balanced brain do much to produce a sound mind and a sound body." And Dr. Madden, in his "Infirmities of Genius," makes the following statement: "That the vigor of a great intellect is favorable to

* Winslow's, *Body and Mind*, p. 61.

longevity in every literary pursuit, where the imagination is seldom called upon."

Buckle, in vol. ii., art. 773, of his *Posthumous Works*, gives the ages of many historical characters in support of the wholesome influence of literary pursuits upon longevity. Kant and Stow, both hard workers and thinkers, lived to be eighty. Strype died at ninety-four. Hobbes reached the age of ninety-one. "Lardner, the learned author of the 'Credibility,' etc., was eighty-four. Lanfranc, archbishop of Canterbury, died in 1089, aged eighty-three. Berenger died in 1088, almost ninety. The learned Allatius died in 1669, aged eighty-three. Montfaucon died in 1741, aged eighty-seven. The celebrated Jacques Sismond, 'l'un des plus savants hommes dont s'honore la France,' died in 1651, aged ninety-two. . . . The celebrated traveler, Carstens Niebuhr, died in 1815, aged eighty-two. . . . Cumberland, the learned bishop of Peterborough, lived to be eighty-six. . . . Reid, the metaphysician, was eighty-six. . . . Simson, the celebrated restorer of the Greek geometry, was turned eighty. Watt died in 1819, aged eighty-three. Lord Kames died in 1792, aged eighty-six. Blair was eighty-two."

And Huet, one of the most distinguished scholars of the seventeenth century, regarded the belief in the unhealthy tendency of study, when accompanied by an orderly, abstinent, and chaste life, as a great error. His words are so wise and appropriate to the subject that I give them as uttered by him: "*C'est une grande erreur de croire que l'étude soit contraire à la*

* See references quoted in Buckle.

santé. On voit autant vieillir de gens de lettres que de toute autre profession. L'histoire en fournit une infinité d'exemples. En effet, cette vie réglée, uniforme, paisible, n'entretient-elle pas la bonne constitution et n'éloigne-t-elle pas toutes les causes qui la peuvent altérer? pourvu que la chaleur naturelle soit d'ailleurs excitée par un exercice modéré et ne soit pas étouffée sous une quantité d'aliments disproportionnée aux besoins de la vie sédentaire."* Huet, himself a most indefatigable worker, proved the soundness of his views on this subject in his own career, living to the ripe age of ninety-one.

The following table, giving the average age of a stated number of men distinguished in the various professions, is from Dr. Madden's work before quoted :

PROFESSIONS.	NUMBER.	AVERAGE AGE.	PROFESSIONS.	NUMBER.	AVERAGE AGE.
Natural philosophers .	1494	75	Philologists	1323	66
Moral philosophers .	1417	70	Musical composers .	1284	64
Sculptors and painters	1412	69	Novelists and miscel-		
Authors on law and			laneous authors . .	1257	62½
jurisprudence . .	1399	68	Dramatists	1244	62
Medical authors . .	1368	68	Authors on natural		
Authors on revealed			religion	1245	62
religion	1350	67	Poets	1444	57

The lives of women distinguished in literature tend also to corroborate the wholesome influence of mental exercise. The following table, giving the ages of many eminent literary women, is taken from Winslow's "Body and Mind":

* Huetiana, No. 3, Amsterdam, 1723.

NAMES.	AGES.	NAMES.	AGES.
Lady Russell	37	Mrs Chapone	75
Mrs. Rowe	63	" Lennox	84
Lady M. W. Montagu . .	73	" Trimmer	69
Mrs. Centlivre	44	" Hamilton	65
Lady Hervey	70	" Radcliffe	60
Lady Suffolk	79	" Barbauld	83
Mrs. Sheridan	47	" Delany	93
" Cowley	66	" Inchbald	68
" Macauley	53	" Piozzi	80
" Montague	81	Miss Hannah More . .	88

The following table is condensed from that given in M. Lombard's work, "*De l'Influence des Professions sur la Durée de la Vie*," and presents the mean age, at death, of a stated number of men, distributed through the professions and trades named, respectively:

No. OF DEATHS.	PROFESSIONS.	AVERAGE AGE.	No. OF DEATHS.	PROFESSIONS.	AVERAGE AGE.
71	Magistrates	69.1	176	Carpenters	55.1
275	Persons with a fixed income	65.8	179	Engravers	54.7
52	Protestant clergymen.	63.8	63	Blacksmiths	54.5
80	Retired officers . . .	63.6	41	Printers	54.3
476	Merchants	62.0	376	Shoemakers	54.2
67	Clerks in public offices	61.9	41	Surgeons, apothecaries	54.0
152	Goldsmiths	61.6	77	Butchers	53.0
47	Founders	59.4	171	Day-laborers	52.4
1073	Watchmakers	55.3	65	Painters and varnishers	44.3
124	Masons	55.2	62	Locksmiths	47.2
43	Tanners	55.2	143	Joiners and cabinet-makers	49.7

The above table of M. Lombard's, who was physician of the Civil and Military Hospital at Geneva, was compiled probably from data furnished by that country. All these tables and facts of longevity are of

exceeding interest, and would be heightened if the mental habits of those distinguished men and women could accompany the record of their age. Their biographies, however, are within easy reach of all.

The following table exhibits in striking contrast the superior advantages possessed by the educated and affluent classes over the uneducated and laboring poor in the struggle for existence, in the borough of Preston, England. I find it in the able report of the Rev. J. Clay to the Board of Commissioners having in hand the investigation into the public health of Great Britain, 1843. Due allowance should, of course, be made with this, as with the other tables, for the inferior sanitary conditions of the poorer classes.* It is full of instruction to those who take an interest in human life and welfare.

Table Showing the Progressive Decrease in the Sum of Vitality of Three Classes of Inhabitants, Preston, England..

	1. GENTRY.	2. TRADESMEN.	3. OPERATIVES.
Born	100	100	100
Remaining at the end of 1st year	90.8	79.6	68.2
" " 2d "	87.6	73.5	57.5
" " 5th "	82.4	61.8	44.6
" " 10th "	81.1	56.6	38.8
" " 20th "	76.3	51.6	31.5
" " 30th "	72.3	45.9	25.2
" " 40th "	63.4	37.5	20.4
" " 50th "	56.	28.1	15.6
" " 60th "	45.1	20.5	11.2
" " 70th "	25.4	13.3	6.1
" " 80th "	8.	4.5	2.1
" " 90th "	1.3	.8	.2
" " 100th "03
	Terminates in the 92d year.	Terminates in the 96th year.	Terminates in the 103d year.

* Health of Towns, First Annual Report, 1844, vol. i. p. 174.

While, therefore, mental culture is indispensable to good health and long life, and the very highest cultivation of the mind not incompatible with great longevity, let it not be concluded that intense application to mental pursuits has no limits beyond which it is dangerous to go. Different constitutions possess different degrees of mental endurance; and the execution of tasks which would be pastime to one would break the mind of another. Rousseau observes that excessive mental application "makes men tender, weakens their constitutions, and, when once the body has lost its powers, those of the soul are not easily preserved."* The effect of an undue and too close application to intellectual pursuits is not unfrequently attended with the gravest consequences; and I am indisposed, therefore, to give a cordial indorsement to Prof. Eichhorn's extreme views of the entire absence of hazard of intense mental exercise, as applicable, at least, to Americans. They do not accord with good reason, and are inconsistent with the laws of organic life. When it is remembered that the intellectual faculties are not the only ones in the mental economy which demand attention; that there is a moral and an affectional group, which cannot be neglected with impunity; and that, after these, there is a lower animal organization upon which the mind is dependent for its healthy activity, and without the due exercise and training of which disease and infirmity must needs result, the danger of exclusive intellectual and moral culture, to certain temperaments especially, will be apparent to all. "If the human being were made up

* Winslow's Body and Mind, p. 155.

of nothing but a brain and nervous system," says Dr. Combe,* "it would be very well to content ourselves with sedentary pursuits, and to confine ourselves entirely to the mind." The Germans, French, and English have, undoubtedly, hardier constitutions than their descendants in our excitable climate; but examples are not wanting there nor here, when the mind has given way under inordinate strain. Sir Humphry Davy's useful career was prematurely ended from this cause; so also were Canning's, Castlereagh's, and others. Sir Walter Scott's case is as notable in this respect as it is painful; and the distinguished Newton became sleepless, and so far lost his memory at one time that he could not remember the contents of the "Principia," his most famous work. Rest, however, seemed to restore him, but Scott's mind "went down in darkness." The celebrated Hunter temporarily lost his memory from the same cause. The careers of a great many statesmen and scholars have been suddenly cut short by intense application to mental labor. Chief Justice Chase's mind gave way from the effect of prolonged and arduous labor; and Mr. Colfax swooned in the Senate chamber from the same cause, and was compelled to retire for awhile from active public life. One of our rarest scholars, Theodore Parker, suffered the gravest symptoms from immoderate mental application,—that of frequent and uncontrollable sadness; consumption ultimately developed, and swept him to an early grave, but for which even worse consequences were likely to have befallen him. Men like Humboldt, Brougham, Mansfield,

* The Principles of Physiology, p. 235.

Binney, Blumenbach, Greeley, Franklin, and Seward ; and women like Hannah More, Martineau, Lennox, and Stowe, are unusual productions of any country. They seem to be independent of the ordinary laws of mentality ; and it is manifestly unsafe to adopt their mental habits as rules for smaller and more feebly endowed men and women to follow.

The scholarly man is usually associated with sallow complexions, spectacles, moroseness, pointed noses, thin legs, and wasted frames, and unsocial, diffident, and awkward manners. In this picture of the student Burton must have had in his mind the studious monk and ascetic of the Middle Ages : " Hard students are commonly troubled with gouts, catarrhs, rheums, cachexias, bradyspepsia, bad eyes, stone, and collick, crudities, oppilations, vertigo, winds, consumptions, and all such diseases as come by over-much sitting : they are most part lean, dry, ill-colored . . . and all through immoderate pains and extraordinary studies. If you will not believe the truth of this, look upon great Tostatus and Thomas Aquinas's works ; and tell me whether those men took pains."*

The propriety of this association, however just as regards the physical characteristics of religious ascetics and theological promulgators of ancient times, is not sustained by the lives and characters of modern students and thinkers. Diversity of studies, generous nutrition, and society obviate in the modern the physical disabilities which formed so large a part of the experience of the earlier student, so forcibly described by Burton. The tendency of modern physiological in-

* Anatomy of Melancholy, part i. sec. 2.

quiry is to cast grave doubt upon the value of ideas and doctrines bred under circumstances thus morbid and ill-conditioned. The characteristics of children are mostly the offspring of their parents: disordered ideas and judgments, the legitimate products of diseased bodies and brains.

In this country nothing is more common than for young graduates from college, some of whom attain high honors, and others who have no business to be in college, to be infirm in health, broken in spirit, and totally unfit to assume the burdens and responsibilities of life. Many of them develop madness and die by their own hands, or are sent to insane asylums for safe-keeping. Others go on with life's work for a season, but are finally compelled to retire from the pulpit, bar, or other posts of labor, on account of bodily disease, vertigo, failure of memory, melancholy, or other symptoms of cerebral disorder. Infirmary of some form or other early shows itself, as the consequence, it is said, of undue mental application! This is quite true in some cases; but in justice to the reputation of intellectual pursuits, it must be admitted that the difficulties have generally arisen in flagrant disregard of the most obvious laws of mental and physical hygiene. This is quite evident to any one who is at all familiar with the habits of an average college student through an ordinary college course. The effects of insufficient exercise, improper food, over- or under-feeding, too little sleep, undue exposure to cold and damp, and a score or more of impure and improper habits, which are as inimical to good health and long life as they are to common sense and sound morality, are most apparent. The instances,

however, of broken constitutions, in consequence of intense and prolonged application of the mind, are not wholly unknown. The effects are so serious, the consequences so lasting and far-reaching, that they merit just recognition and a careful guarding against. The most prominent indications of an over-burdened brain may be briefly stated. The incipient signs of undue exercise of the mind are, mental disquiet; imperfect or unrefreshing sleep, or complete insomnia; vertigo; nervous hyperæsthesia; sad, disconsolate humor; disinclination for society. The subject often experiences a sense of physical exhaustion, unappeased by repose or food, but which, at first, may be overcome with copious libations of tea or coffee, and later requires the stronger stimulus of opium or alcohol. The relief from this source, however, is only temporary: the needed remedy is rest and relaxation,—absolute and unconditional.

If the cause be persisted in, the signs soon become more pronounced. Vertigo is more constant and severe, now and then accompanied by slight symptoms of syncope. If such obvious warnings be duly heeded, and remissions of mental toil acquiesced in, the subject may yet avert a serious calamity, for the brain is the most hardy of all the bodily organs, and will bear the most abuse; if otherwise, absolute failure of the physical and mental powers—loss of memory, delusions, morbid impulses, errors of judgment, palsy; or actual suicide, apoplexia, paralysis, destructive mania, or imbecility—supervenes, from which complete—in most instances not even partial—recovery is to be expected. In physiology, the consequence of seriously overtasking the mental faculties

is analogous to the sin against the Holy Ghost, and is quite as unpardonable.

The remedy for these evils has been already indicated. It will be found less in medicines, prayers, and penances, physical genuflexions, etc., than in attention to the laws of the whole economy. By a just attention and respect to these, the student, statesman, or writer, the devotee of science, or the cultivator of art, will accomplish all he now does, and more, in most instances, without seriously compromising the integrity of his mind. Just rules to govern the amount of brain-labor, applicable to the various conditions and temperaments of people, are impossible. Immunity from danger from this source can be approximated only in a more uniform exercise and development of the mental faculties. There must be less concentration on one faculty or group of faculties,—more diffusion of the blood and nervous energy to parts or powers in disuse, and too often permitted to run to waste. So far as the exercise of the mind is involved, this law, if duly complied with, would tend, obviously, to prevent most of the evils attributed to brain-exhaustion, and to secure harmony and happiness where now is vexation and disappointment. This indication however cannot be fulfilled without greater diversity of mental employment,—mental exercise. In respect to more definite suggestions for mental labor, the views of Dr. Ray, so far as they go, seem to me eminently wise and judicious:

“How much a man may use his brain without endangering its health is a question that admits of no definite answer, because it depends very much on the original stamina of the individual, and the intensity

of his application. While it is easy, oftentimes, to see that this or that person is overtasking his powers, it is impossible to lay down any general rule on the subject that would not require too much of some and too little of others. In youth and early manhood, especially if the constitution is deficient in vigor, there would be danger from a degree of application that might be safe enough at a later period, when the brain has become hardened by age and regular labor. So, too, habits of active physical exercise will enable a man to accomplish an amount of intellectual labor that would utterly break down one of sedentary habits. After making all due allowance for these differences, I think we may say that few can exceed six hours a day of close mental application without seriously endangering the health of the brain; while, for most persons, a not unreasonable degree of prudence would prescribe a much shorter period.”*

The brain, however, is frequently the most enduring organ in the economy, and can sustain an activity the most concentrated and prolonged. The following are a few notable examples :

“Many literary masterpieces were written at a sitting. The first draft of ‘The Castle of Otranto’ was nearly finished thus, the author only desisting because he was physically unable to hold his pen. ‘Vathek’ was completed in three days and two nights of incessant effort. Dryden finished ‘Alexander’s Feast’ in a day and a night, and it is said that Mrs. Browning wrote ‘Lady Geraldine’s Courtship’ in twelve hours. Shelley, Byron, and Theodore Hook wrote with amaz-

* Mental Hygiene, pp. 110-11.

ing rapidity; so did Scott, who seldom or never corrected. Dryden tells us that his thoughts came pressing in so fast that he had scarcely time for selection. He composed the 'Parallel between Poetry and Painting' in twelve mornings, and the 'Medal' in a few days. It was the same with Dr. Samuel Johnson, who wrote his admirable 'Life of Savage' in a little more than thirty-six hours, and his oriental romance of 'Rasselas' for the purpose of obtaining funds to defray the expense of his mother's funeral."*

Great men are usually—great geniuses always—distinguished by the power of their minds and the tenacity of their memory. Theodore Parker, Sir Walter Scott, and Charles Sumner are conspicuous examples of men with remarkable memory.

"Dr. Johnson, it is said, never forgot anything he had seen, heard, or read. Burke, Clarendon, Gibbon, Locke, Tillotson, were all distinguished for strength of memory. When alluding to this subject, Sir William Hamilton observes: 'For intellectual power of the highest order, none were distinguished above Grotius and Pascal, and Grotius and Pascal forgot nothing they had ever read or thought. Leibnitz and Euler were not less celebrated for their intelligence than for their memory, and both could repeat the whole of the "*Æneid*." Donellus knew the "*Corpus Juris*" by heart, and yet he was one of the profoundest and most original speculators in jurisprudence. Ben Jonson tells us that he could repeat all he had ever written and whole books that he had read. Themistocles could call by their names the twenty

* The Golden Age, May 10, 1873.

thousand citizens of Athens. Cyrus is reported to have known the name of every soldier in his army. Hortensius (after Cicero the greatest orator of Rome), after sitting a day at a public sale, correctly enumerated from memory all the things sold, their prices, and the names of their purchasers. Niebuhr, the historian, was no less distinguished for his memory than for his acuteness. In his youth he was employed in one of the public offices of Denmark; part of a book of accounts having been destroyed, he restored it by an effort of memory.'"*

Disregard of the hygienic relations of the physical economy is, also, an element of embarrassment to mental application. There are physical conditions which make right thinking difficult or absolutely impossible; and if the mind be forced to its work under the tyranny of such restraint, a minimum of exertion proves too often an excess. If the stomach be weak, as is more commonly the case in this country, an indigestible dinner furnishes a most effective check on the operations of the intellect. Neglect of the ordinary aids to digestion and assimilation; proper oxygenation of the blood; wholesome discipline of the passions; the society of our fellows; and the higher stimulus of living with the hourly approval of conscience, are all important factors in estimating the powers and capabilities of the mind. Want of attention to these fundamental conditions renders minds fitful in application that would otherwise be always ready for any task however difficult. Most authors are compelled to wait for the writing mood, in order

* Ibid.

to compose to their satisfaction. This was notoriously the case with Hawthorne; and even the genial Thackeray complained of the same difficulty. The cause is to be found in just this disregard of conditions, the observance of which is indispensable to the free and unrestrained activity of the mind. A mind prepared for its work will accomplish in an hour what it otherwise would require three or four hours to do, or be incapable of doing at all; and what is only a mental pastime under propitious circumstances becomes positively irksome and injurious under others. If the proper mental conditions be supplied, and the diet be such as to afford the requisite nourishment, in suitable form, to the brain, mental work could probably be safely prolonged to as many hours a day as muscular work, under equally favoring muscular conditions. On this subject Dr. John Todd observes: "No fixed time can be marked out for all. This must vary with the constitution of each individual. A mind that moves slowly requires and will bear more time for study. In Germany, the students spend many more hours than we can in this country. I have tried to account for the fact that, with their preposterous habits of eating and indolence, they can study so many hours a day, and that to extreme old age. Doubtless national habits do something; individual habits do something; but these will not account for it. Many of them will study sixteen hours a day; few of them less than thirteen. We should all die under it. The difference may be attributed to two causes, for the correctness of which I cannot vouch, viz., their mental operations are slower than ours, and their climate is less variable and better adapted to a student's life.

Few, in our country, ever studied half so much as they have, if hours are to be the criterion. . . . Be this as it may, it is certain that we must do what we do, by way of daily study, in fewer hours; and, in my view, it is vastly better to chain the attention down closely and study hard a few hours, than to try to keep it moderately fixed and engaged for a greater length of time. Our most successful students seldom study over six hours in a day. In this I include nothing of recitations, of desultory, half-formed impulses of the mind; but I mean real, hard, devoted study. He who would study six hours a day with all the attention of which the soul is capable need not fear but he will yet stand high in his calling. But mark me—*it must be study as hard as the soul will bear!* The attention must all be absorbed; the thoughts must all be brought in, and turned upon the object of study, as you would turn the collected rays of the sun into the focus of the glass when you would get fire from those rays. Do not call miscellaneous reading or anything which you do by way of relief or amusement, study: it is not study. Be sure to get as much of your study in the morning as possible. The mind is then in good order. *Aurora musis amica, necnon vespera.*"*

* Student's Manual, pp. 108-9. Rev. John Todd, D.D.

CHAPTER IV.

MORAL AND RELIGIOUS INFLUENCES.

"To say that a man's character and conduct are determined, in a great degree, by the original constitution of his brain and nervous system, is to utter a truth that can hardly be called new. Few, however, are disposed to make any proper account of those central qualities which imply a deviation, of some kind or other, from the line of healthy action. It is not in accordance with the philosophy of our times to see in them an explanation of those strange and curious traits which are utterly inexplicable on the principles that govern the conduct of ordinary men. How, then, could they expect the popular approbation, who find in them a clew to some of the mysteries of human delinquency? But the teachings of science, the stern facts of observation, cannot be disregarded. Whether we ignore them or not, sooner or later their full significance will be triumphantly acknowledged."—*Ray's Contributions to Mental Pathology*, pp. 46-7.

"We live in a transition period, when the old faiths which comforted nations, and not only so but made nations, seem to have spent their force. I do not find the religions of men at this moment very creditable to them, but either childish and insignificant, or unmanly and effeminating. *The fatal trait is the divorce between religion and morality.* Here are knowing religions, or churches that proscribe intellect; scortatory religions; slave-holding and slave-trading religions; and in the decent populations, idolatries wherein the whiteness of the ritual covers scarlet indulgence."—*Emerson's Conduct of Life*, p. 181.

THE development of the religious principles is indispensable to the health of both body and mind. Hitherto morality and religion have been not only divorced from each other, but removed from the association of things physical to a plane above the common level of human nature. In the popular conception, religion is something devised for man's wearing; a

garment fitted for him by superhuman hands, which he can put on or off as occasion requires; and which may afford him much inconvenience in this world of practicalities, but which it would be exceedingly unsafe to be without in the world to come:—a mask for Sundays, holy days, the confessional, superannuated stipendiaries, and death-beds! Long ago, in our youthful days, we “experienced religion,” and urged its benefits upon our young playfellows and sisters. The reply invariably was: “I don’t want religion now; it would interfere with my fun. Wait until I am sick, or old, and likely to die; it will then be time enough to get it.” Such child-like ideas of religion were in strict accord with the literal teachings of the pious then; nor do they differ materially from that dealt out to needy people in the catechisms and pulpits of to-day!

True religion is not in the market, and cannot be bought and sold, bartered for, nor begged with a prayer. It is distilled in the human heart, by slow and silent processes, and is, in truth, as truly an evolution in humanity as passion or reason; and, not unlike those elements of the human mind, subject to laws, which, while they are divine and spiritual, are not the less material and physical. It springs legitimately from man’s moral nature; from those innate sentiments of justice, mercy, faith, and hope; the love of purity, goodness, and truth; and the inner consciousness of a Supreme Being, which is, after all, the only demonstrable proof of his existence afforded by nature. Mr. Emerson says of people of superior moral quality, that they “are nearer to the secret of God than others; are bathed by sweeter waters; they hear notices, they see visions, where others are vacant. We

believe that holiness confers a certain insight, because not by our private, but by our public force, can we share and know the nature of things.”*

These divine elements of human nature exhibit the highest expression of creative wisdom; they comprise the moral sense, the possession of which distinguishes man from the lower animals. If they be not the product of man's moral brain, it is demonstrable that they are dependent upon it for exercise and manifestation; and that they are variously modified by causes which affect the brain and nervous system. Indeed, the highest manifestation of the moral sense is always associated with a corresponding development of the brain and nervous system. In nature the one is never observed dissociated from the other.

The purpose of our inquiry, however, is not affected by questions respecting the abstract nature and origin of the moral powers. The investigation of those belongs to the provinces of physiology and psychology. It matters not, in a practical sense, whether they be the cause or sequence of the physical faculties. Their intimate connection and sympathy with physical agents and influences have been demonstrated, and sufficient warrant is afforded thereby for their surrender to the associate care of the physician and moral teacher.

In a fully developed, well-balanced mind, the moral faculties comprise about one-fourth of the cerebrum. The finer feelings, emotions, and sentiments, which dignify and ennoble the character, are associated with this part of the sensorium. Religion has its rise and authority in the activity of these superior faculties,—

* Essay on Worship.

not the forms, symbols, oblations, ordinances, and theological doctrines with which religion has been invested, but the tendency to love and worship the grand and beautiful in nature; the desire for inward purity and goodness, "to do justly, and to love mercy, and to walk humbly"* before Heaven. The possession of these powers constitutes man a religious being, let the manner of their exercise be what it may. The fire-worshipping Parsee, or the humble believer in Buddha and the authority of the Institutes of Menu, or the devout follower of Fohi and Confucius, with all his grotesque forms, gesticulations, and ordinances, is no less religious than the praying Christian, with his cross and eucharist, of a more rational civilization.

The neglect of moral culture and religious discipline is, obviously, incompatible with good health, usefulness, and the highest degree of happiness. "If your eye is on the eternal," says Mr. Emerson, in the essay already quoted, "your intellect will grow, and your opinions and actions will have a beauty which no learning or combined advantages of other men can rival. The moment of your loss of faith, and acceptance of the lucrative standard, will be marked in the pause or solstice of genius, the sequent retrogression, and the inevitable loss of attraction to other minds."† "I think it may be assumed," says Dr. Austin Flint, "that the exercise of pure and lofty sentiments is conducive to the health and vigor of body as well as mind."‡ The active cultivation of these powers is demanded by the highest considerations of

* Micah vi. 8.

† Essay on Worship, p. 190.

‡ Practitioner, January, 1872.

physiology, morality, and the spiritual welfare and prosperity of the race. What has already been observed respecting the necessity of maintaining functional balance between the corporeal and mental functions applies with more than ordinary force to the development of the moral faculties and intellect. Atony in the latter not only disposes to physical disease, but is the direct source of more wretchedness to the individual and to society than it is possible to detail or even estimate. The perception of the principles of the Creator's moral government rests entirely on the integrity of these powers. Intellect there may be, reason, and the highest analytical and logical powers, but if the moral sense be wanting the individual is stripped of responsibility and becomes a moral idiot! The consequence of their defective influence upon the character finds painful expression in the manners and social habits of mankind. The annals of crime illustrate this fact in a marked degree, as all know; but it is not pertinent to refer to them for examples of my meaning: they are too obvious and flagrant for question. The moral customs of the more law-abiding—the well-to-do and respectable classes—come more particularly within the scope of my criticism. The business and social habits of such exhibit a lamentable deficiency in moral principle, differing, not in kind but only in degree, from that which animates and impels the most flagitious violator of public morality. The almost universal absence of fair dealing among men; the corruption of public officers, politicians, and the American Congress; the lack of honor in minor business relations when inconsistent with personal interest; the fashionable hypocrisy so widely

cultivated in social circles, which incites nominal friends to profess feelings and emotions toward each other which neither feel, and to practice numberless acts intended to deceive; the custom of making a principle of expediency, and of compelling the tongue to impeach the heart in the interest of a lie, a project, a position, a point, or a purse; the vain willingness, so prevalent among nominal Christians, to pass for more than their true personal value,—to seem better than they really are; the canting hypocrite in places of trust and responsibility; the tendency to exalt the reputation at the expense of innate character; to live the life of a devil in secret and that of a saint in public; these customs and practices in modern society illustrate the moral deficiency to which I refer.* While there is no lack of popular religion, indeed that element appears in excess everywhere, immorality of this type has completely honeycombed the fabric of modern society, and made respectability and hypocrisy nearly synonymous terms! Look at the moral conduct of professional men,—physicians, who, to pursue their practice in a becoming manner, ought to be worthy of a commission from the Most High! How many of them allow an opportunity to appropriate the hard-earned success of a colleague to pass unimproved? How common is the habit of evil speaking of each other among them; or, if wanting in moral courage to speak, “damn with faint praise;” or, still worse, fatally wound the reputation of a colleague by a look, a contemptuous lift of the eyebrow, or other supercilious pantomime, incompatible with even a moderate

* See note at the end of the chapter.

sense of honor and justice! Instances have been known—or at least *heard* of—in the noble profession of medicine, of stealing a colleague's client by arts and tricks which, although not *illegal*, if done openly, would expel the moral culprit from the society of all right-minded men and women!*

How common are breaches of fidelity and courtesy in social intercourse; insolent, or overbearing conduct toward fancied inferiors; the indulgence of envy, malice, morbid suspicion, jealousy; contempt for poverty and the poor; obsequiousness toward wealth and the rich; habits of evil speaking and unwarrantable detraction; ungenerous and uncharitable judgments; rejoicings over the misfortunes of a rival,—I will not say an *enemy*, for it is quite unhuman to take pleasure in the prosperity of such a rival; praying in public; putting on the garb of religion, or frequenting places of worship, for business ends; libeling an opponent, or retailing gossip to his prejudice; taking undue or unfair advantage in trade; false representations; habits of exaggeration; practicing numberless devices—not

* The writer, on a particular occasion, sent for a colleague to assist him in the conduct of a difficult case. The counsel was a dignitary in one of the Christian churches, and had sustained the usual reputation among his class, of being a man of probity and honor. He responded to the call in due time, and courteously rendered all necessary aid. The following day, to the writer's surprise, he sent the patient his professional circular and card, and left a verbal request, that she would consult him respecting some chronic malady, which he had been happy enough to discover in the lady,—or, at least, to fancy he had,—as soon as she was recovered from her present illness! The moral turpitude of his course, bad at the best, is aggravated by the relation which he professed to sustain to his colleague,—that of cordial personal and professional friendship. Acts, so manifestly dishonorable as this, are, unhappily, not very uncommon in the profession of medicine!

strictly unlawful—by which profits may be enhanced: as underweight; watering milk, whisky, and molasses; selling some articles below cost, and others above, in order to attract custom by *appearing* to undersell a neighbor; adulterations of food and drink and various articles of manufacture; sales of shoddy, or damaged goods and merchandise, etc.! It is impossible to mistake the animus of these things, nor to doubt that they are committed by people who would do worse acts if they dared. Fraud and dishonor are so common in Christendom, in all the trades, customs, usages, dealings, and professions, as to suggest universal plethora of the passions and propensities, and a corresponding anæmia of the moral brain and sense. Everybody suspects the honesty of his neighbor, and the neighbor, in turn, suspects the trustworthiness of everybody; and in the moral chaos of the times the skeptics find new and just reasons to doubt the practical value of the gospel, and the pagans to make caustic reproaches against the religion of Christ!

It is needless to remark that the prevalence of such vices indicates moral aberration, an unsound, ill-balanced mental constitution, inimical to the health of either body or mind. They have an origin in the undue and unrestrained activity of the selfish propensities; powers good in themselves, not necessarily vicious nor vitiating, nor incompatible with the noblest moral and intellectual endowment, whose function it is to look after the interests of self. They are legitimately self-seeking, and very properly concerned in the supply and gratification of the animal wants. It does not accord with their nature to be choice in the means or method employed to this end. Who ever

saw an animal mindful of the rights and feelings in its fellows? Foxes rob hen-roosts, dogs steal their dinners, and animals, in general, prey upon one another for the same reason and in the exercise of the same impulse that impels men, when unrestrained by the moral sense, to prey upon the rights and interests of their fellow-men. Nothing better is expected of the animal, for reasons well understood; but a high moral sentiment would effectually oppose such flagrant disregard of the rights of others by man; and he is, in general, afraid or ashamed, when actuated by no higher motive, to commit such deeds openly and above board, and accordingly seeks the shadows of the night, and the ingenuity of low cunning or adroit trickery, to achieve the end he desires, without incurring the legal penalty attached!

The natural safeguard against the existence and exercise of such perversity in man is found in strengthening the moral sentiments with which the Creator has endowed every human creature. These are the natural antagonists of the propensities. While the latter are self-seeking, the former are concerned with the interests of others. A high sense of honor is shocked at the thought of committing deception or telling an untruth; a fine sense of justice is outraged at the idea of double dealing, or in "playing sharp," as so many glory in doing; the sentiment of benevolence is wounded at the sight of distress and poverty, and finds the sweetest consolation in binding up broken hearts and relieving the wretchedness of the world, without regard to race or moral condition. The beautiful story of the good Samaritan is a fine illustration of the influence of this sentiment upon the

character. It seeks not its own but others' good. In a world of so much want and misery, arising, in good part, from privation of the physical comforts of life, the hoarding of great riches would seem to be incompatible with the possession of a large degree of goodness; and from this point of view the advice of Christ to the rich man seeking salvation, to sell all he had "and give to the poor," receives additional force and meaning.

The aspiration for inward goodness and purity is also peculiar to man, and its cultivation holds him absolutely above the practice of everything mean and groveling. It is illustrated in the prayer of the Hebrew poet: "Create in me a clean heart, O God, and renew a right spirit within me."* It was also exemplified in the character of that eminent rationalist, Gibbon, who, through fear of being thought better than he really was, persistently endeavored to appear to disadvantage,—to put the worse side out. A good man is truly upright in all his ways, and delights in the love of the good and the beautiful, and in dispensing joy and happiness to all around. "A good man," said Christ, "out of the good treasure of his heart bringeth forth that which is good; and an evil man out of the evil treasure of his heart bringeth forth that which is evil."†

Then, again, the exercise of deference and respect to our fellows and to the Supreme in nature is another important element of moral gymnastics. The true man worships the divine in all things, and is drawn away from the selfish and ignoble toward the Supreme

* Psalm li. 10.

† Luke vi. 45.

Good. There is no stronger element in the moral brain than this; and its proper cultivation would do much to withdraw the mind from the purely sensuous and selfish to the supremely virtuous and exalting. Under the influence of superstition this tendency in man is liable to abuse or perversion. It then leads to idolatry, or the worship of ignoble things, animate and inanimate objects, saints, relics, symbols, emblems, sacred writings, objects of nature, the stellar universe, etc. "We worship the promotion of all good," says the Zend Avesta; "all that is very beautiful, shining, immortal, bright, everything that is good." The heathens, however, are not the only idolators. If idolaters are those who confine not their worship to the Infinite Spirit, the number is exceedingly large, and limited to no race nor condition of mankind.

Again, there is another principle in man's stellar crown which, perhaps, has no parallel in nature, namely, the *love of right*. Surely, nothing can equal the grandeur which this element imparts to the character. It suggests the thought of duty, and compels the individual to respond to duty's call, whatever may be the consequences to himself. "Let justice be done, though the heavens fall!" is its stern decree. It does not calculate the consequences; they must take care of themselves. It does not ask, "Is this course expedient?" but rather, "Is it right? Ought I to do this thing?" If he ought to do it, it is done, and the consequences are left with God.

Conduct inspired by a high sense of duty is characteristic of great minds; and the fearless courage which such minds exhibit, when occasion requires,

is characteristic of this sense. Goethe says,* that "Napoleon visited those sick of the plague, in order to prove that the man who could vanquish fear could vanquish the plague also; and he was right. 'Tis incredible what force the will has in such cases: it penetrates the body, and puts it in a state of activity, which repels all hurtful influences; while fear invites them." "Be just and fear not!" is its inspiring motto. Henry Clay expressed the natural language of the principle when he uttered those memorable words: "I would rather be right than to be President." There is something peculiarly noble and ennobling in a character which subordinates all considerations to that of conscience and a sense of duty. Such characters furnish the stuff that martyrs are made of. They glory in obloquy, persecution, and proscription for the sake of their convictions; fearing nothing so much as the fear of wronging their neighbors. And death itself, for truth's sake, instead of bringing pain and wretchedness in its contemplation, increases the joy and glory of an existence of which meaner mortals can have no adequate conception or appreciation. "Blessed are ye, when men shall revile you, and persecute you, and shall say all manner of evil against you falsely, for my sake."† Christ admonishes such to rejoice and be exceeding glad, and says their reward will be correspondingly great in heaven. In physiology every act has its recompense. Providence pays as he goes, asking no man to trust him; and that such acts of moral heroism and personal abnegation should be also rewarded hereafter, seems not an irra-

* Quoted from Emerson's "Conduct of Life," p. 203. † Matthew v. 11.

representation, as a consequence of the repugnance of the people to the payment of tithes. "In the ninth century, a total eclipse of the sun struck terror through Europe, and is said to have been one of the causes of the death of a French king. In the tenth century, a similar phenomenon put to flight an entire army. More than once, the apparition of a comet filled Europe with an almost maddening terror; and whenever a noted person was struck down by sudden illness, the death was attributed to sorcery."* "Conscience makes cowards of us all," says the great bard. There is no end to the evil imaginings of a wicked heart, nor to the terror which a belief in the power of omnipotent justice inspires in the mind of the evil-doer.

While, therefore, fear, ignorance, and credulity are the foundation of superstition, in its modern acceptance, superstition and theology are the foundation of religion—of all the religions that have, in turn, blessed and cursed mankind,—blessed, in restraining the ignorant and vicious from careers of vice and crime; cursed, by making use of the symbols, rites, devices, doctrines, and other religious enginery to blind the eyes of those who have eyes to see, and to enslave the mind of those who are capable of comprehending the truths of God and nature, and who need no other inducement to live uprightly and to walk humbly than the reward which naturally accompanies a pure and virtuous life. In making error a crime, punishable by the most hideous penalty that a morbid imagination can conceive of; in compelling outward assent to certain creeds and doctrines on penalty of unending torture; in ranking

* History of Rationalism in Europe, vol. i. p. 64. See references there.

of morality. The fortitude and courage in trials and misfortune; the firmer self-reliance, and calmer faith and trust, under affliction; while they secure greater exemption from the operation of morbid causes in general, render him far less likely to succumb to them when ill than men less happily endowed. This fact has been observed by many writers* on hygiene and therapeutics, and affords additional inducement to the lovers of an old age, particularly, for the active cultivation of the moral powers. Mr. George Combe felt impelled by considerations, physical as well as moral, to affirm that a certain portion of each day should be set apart for moral and religious culture. His observations on this point are so eminently wise and judicious that I cannot forbear to give a brief space to them:

"So many hours a day ought to be devoted to the cultivation and gratification of our moral and religious sentiments; that is to say, in exercising these in harmony with intellect, and especially in acquiring the habit of admiring, loving, and yielding obedience to the Creator and his institutions. This last object is of vast importance. Intellect is barren of practical fruit, however rich it may be in knowledge, until it is fired and prompted to act by moral sentiment. In my view, knowledge by itself is comparatively worthless and impotent, compared with what it becomes when vivified by lofty emotions. It is not enough that intellect is informed; the moral faculties must co-operate in yielding obedience to the precepts which the intellect recognizes to be true. As creation is one great

* "In so far, then, as bodily health and vigor afford protection against disease, the exercise of these sentiments is prophylactic."—*Dr. Austin Flint.*

followers, time after time, that the secret of so-called miracle-working was credulity: "And Jesus said unto them, *Believe* ye that I am able to do this? They said unto him, Yea, Lord. Then touched he their eyes, saying, According to your *faith* be it unto you." And to the woman who had been ill for twelve years, and who was finally cured by a single touch of his garment, he said: "Daughter, be of good comfort; thy *faith* hath made thee whole."* "All things are possible to him that *believeth*." "He that *believeth* shall be saved; he that *believeth not* shall be damned,"† etc. The apostle James recommended praying for the sick. "Is any among you afflicted? let him pray." "And the prayer of *faith* shall save the sick," etc. The apostle Paul was an ardent believer in the efficacy of faith. "For we walk by *faith*, not by sight," said he, in his second epistle to the Corinthians. And again, in his epistle to the Galatians: "But the Scripture hath concluded all under sin, that the promise *by faith* of Jesus Christ might be given to them that *believe*. But before faith came, we were kept under the law, shut up unto the faith which should afterwards be revealed. Wherefore the law was our schoolmaster to bring us unto Christ, that we might be *justified by faith*,"‡ etc.

Such is the foundation of the absurd pretensions of all the great religions of the world; witchcraft; fortune-telling; magnetism; medical charlatanry; and, also, of other curious psychological phenomena, of which the world is so full to-day. The extravagant

* Matt. ix. 28, 29, 30.

† Mark ix. 23; xvi. 16.

‡ James v. 13, 15; 2 Cor. v. 7; Gal. iii. 22, 23, 24.

belief in the offices and power of the pope gave him, at one time, absolute control, not only of the private conscience, but also of science, literature, and the social and political affairs of Christendom. The terror of excommunication brought princes and philosophers, peasants and politicians, down on their knees; and a papal bull could convulse a continent, and send consternation to the hearts and homes of millions of people. So long as the people *believed* in him, put implicit *faith* in his pretensions and doctrines, the church had a fulcrum by which it could move the world.

The history of all people is full of abuses of this fine element of human nature. Lesanky's "Voyage Around the World," gives an "account of a religious sect in the Sandwich Islands, who arrogate to themselves the power of praying people to death. Whoever incurs their displeasure receives notice that the homicide litany is about to begin; and such are the effects on the imagination, that the very notice is frequently sufficient with these people to produce the effect.*" The Fijian savages, in the South Pacific have a woman sorcerer to attend them when sick. She proceeds to cure her patient by applying her mouth to his body and pretending to suck a quantity of pebble-stones from him. She assures the sufferer that the disease is thus taken away from him; and such is the power of faith that he speedily recovers. When a chief dies, several of his servants are buried alive with him. To this custom they cheerfully submit, that they may attend their chief in the other

* Winslow's Body and Mind, p. 156.

world. Wives are frequently buried with their deceased husbands, mothers with their sons, that they may be companions, still, in hades! Such is the power of unlettered faith. "To murder a wife," says the relator, "that she may be the companion of her deceased husband in hades, or a mother, that her son may not be buried alone, would be repugnant to every Christian heart; but not so to the Fijian."* Undoubtedly; but then, burning alive the unhappy sorceress and possessed witches and spiritual mediums; putting to death, by slow torture, the heretic and pronounced infidel; and decapitating those whose only guilt consists in refusing to yield obedience to established customs, rites and opinions, and many other religious *anomalies*, of similar nature, which has been so largely practiced in Christian countries, would probably be repugnant to every Fijian heart. Would we might say it were equally so to every Christian!

In England there exists a religious sect called the "Peculiar People," who still insist on practically maintaining the doctrine taught by St. James in the fifth chapter of his epistle, namely, to treat the sick with anointings and prayers. One of their number failed to recover, recently, under this treatment, whereupon the civil authorities placed the relatives of the deceased under arrest for failing to call in the aid of science in treating the deceased. The offenders were promptly released by their Christian prosecutors when the scriptural line of defense was made known! The "Peculiar People" are regarded by their Christian neighbors as superstitious, and are placed by them

* Williams's Fiji and the Fijians, vol. ii. p. 105.

under the ban of ridicule, totally oblivious, seemingly, of the fact that Christian prelates, popes, and kings practiced the same custom for centuries with scarcely provoking a smile.

The world recently witnessed the curious spectacle of a whole nation in prayer for the life of a Christian prince, and the heir apparent to the English crown. The prince recovered, happily; but whether he did so through the direct answer to prayer can never be determined, since the friends of the patient were unwilling to trust him to the influence of prayer alone, but, with strange inconsistency, called in the aid of the medical art! Just as if God needed the help of medicine to work his will! We will only remark that the want of faith in the efficacy of human supplication, evinced in refusing to commit the cure of disease to the old power of superstition in this instance, is a most cheering sign of Christian progress. It indicates the triumph of common sense over the idolatrous teachings of religious advocates and creeds, of reason over credulity, of an intelligent faith over a degrading superstition, of the spirit of Christ over the doctrines of Paul and Constantine. The parallel of praying people into health when sick is that of praying them to death when well. The practice of one is quite as consistent as that of the other. The success of either may be possible under certain conditions of the human mind,—a mental condition which has been supposed to be incompatible with civilization and which is chiefly prevalent among the primitive tribes on its borders. It were manifestly inconsistent with reason and sound judgment to ridicule the one and to respect the other. The power which is here pre-

sumed to give health, dissipate pestilence and famine ; promote the growth of crops, business`enterprises, diplomacy; and which sends rain, or sunshine, in answer to prayer, could surely, by the exercise of a prerogative of far less scope, as easily encompass the life or death of a few unfortunate individuals, through the like influence, especially if the appeal be sufficiently eloquent and accompanied with the requisite degree of faith ! To this absurdity doth the premise lead.

NOTE.

The moral precepts and religious character of Christ have probably no equal in beauty and excellence in human history. The moral inconsistency of his professed followers is also without a parallel. There are to my mind no phenomena in all nature so strange and erratic as that presented by the average Christian ! He prays to be like his Divine Master, who declaimed against riches and took " no thought for the morrow," and straightway engrosses every thought in plans for acquiring wealth ! He prays to be delivered from all manner of wickedness and deceit, and engages directly in both with all the ardor and bent of his mind ! The symbol of self-sacrifice—the cross—he mounts upon conspicuous church-spires, pictures it upon prayer-books, and carves it in wood, stone, and the precious metals, for household ornaments, charms, personal ornamentation, etc., and prosecutes, meantime, the most intricate schemes of selfish profit, in which he knows success must be attained at his neighbor's cost ! Nor is this the worst. He engages in stock-gambling, robbing

the national treasury, the embezzlement of trust-funds, and indulges heartily in *Credit-mobilier* and "Back-pay"! These operations may almost be said to have become respectable from their magnitude, and the high Christian character of the men who engage in them. Some of the smaller and less reputable forms of thieving and deceit by professed Christians have been mentioned in the foregoing pages; but I cannot forbear to add the following testimony on the subject from the distinguished orator and clergyman, Henry Ward Beecher:

"Have we a conscience that loves the simplicity of truth for its own sake? The customary lie, the profitable lie,—are they not common in religion, in business, and in politics? You do not need to go back to the old ancient notion of honor—inflexible truthfulness. Can there be anything that our boys and girls are more likely to be benefited by than to be ashamed of lying in every form? Take the matter of honesty. We are not a dishonest nation. Is a man striving to make a competency? I would make it by honesty; but the question is, suppose he cannot, what then?

"A young man, my neighbor, dries paint. He said to me the other day, 'This matter has got to such a state that the paint-men cannot be honest. My wife says to me, Why don't you go to communion? I say I cannot when I know I have got to cheat the next day. I have to do so, and my customers know it,—and they want me to.' The adulteration is ninety per cent. He tells me it is one-third lead, then zinc, and then varieties ground together. 'That is what they demand,' he says.

“‘I sell more that has not any lead in it than that which has.’ I ask him, ‘Where does that go?’ He tells me, ‘West and Northwest. Men that buy from me are not very particular sometimes about having lead in it. There is a man who buys a great many times from me during the year, and he is not particular if the lead is not in it. He is a good man, worth four hundred thousand dollars; is a member of the church, for I know he teaches a Bible-class. He comes down to me, and says, “My friend, can’t you put a little lead into the paint you sell me?”

“‘So I thought I would oblige him, and when I was melting a ton of lead I took a spoonful, and I put it into his paint, so that then he would be able to say to his customers, “Yes, there is lead in it.”’ Although this may seem exaggeration, it is all the better for it, for exaggeration magnifies the object so that you can see better. It is not exaggeration to say that society has carried dishonesty into the organic structure of much of its business.

“In coffee there is always adulteration. Sometimes it is better for the adulteration ;[?] but it was thought the adulteration of chicory was not bad enough, and roast peas or beans were added, and they took old ship-bread that had made a couple of voyages, and put it in.

“How is it with wine? I am not so familiar in that direction. But I hear rumors about it. How is it about all the products that come into the apothecary-shop? I hear men say that lives are lost because of adulterations in drugs, and that patients break down because the chloroform was not what it professed to be, when used by the physician. Is cloth always what

it professes to be? Is there no cheating in linen, in iron, in stone, or plaster, in painting, or in building?

"Mechanics have become debauched, and manufacturers have become debauched. There is a principle of dishonesty, which is among themselves recognized, but they do not like to talk about it to others. It belongs, part and parcel, to the whole deterioration of the community when they want more than they render an equivalent for."—*Lecture on Compulsory Education, by the Rev. H. W. Beecher, New York, January 9, 1873.*

These curious phases of moral phenomena indicate errors of mental culture, rather than total depravity or original sin. They must necessarily follow the disproportionate exercise and development of the mental powers. The true remedy obviously consists in *diversity of mental occupation, and in especially avoiding prolonged mental concentration on single objects and pursuits.*

CHAPTER V.

MORAL AGENTS AND INFLUENCES.

THE active cultivation of the moral powers is thus seen to be demanded by the highest considerations of a sound hygiene. Its importance has by no means been over-estimated by the advocates of revealed religion. Mistaken they may have been respecting the means and methods, objects and ends, rewards and compensations: but, if there be no sulphureous fires to guard against; no angry Deity to propitiate; no longer or shorter catechism to subscribe to; or penances to practice, oblations, genuflexions, or outward sacrifices to perform, as precedent to admission to a golden paradise, there is nevertheless a mind to cultivate and strengthen, a soul to redeem from imperfections, and a life to be harmonized in accordance with the eternal principles of goodness, purity, and truth. To this end, no less the considerations of physiology, it is necessary to cultivate the moral powers, and make use of certain moral agencies and methods.

FAITH.

1. Faith* is the most prominent of these powers.

* Franklin was a great believer in faith. "I do not desire faith diminished, nor would I desire to lessen it in any man. But I wish it were more

The exercise of faith, faith in one's self, faith in God, the laws and principles of nature, the Divine government, the unseen and unknowable, is essential to genuine human progress. Saint Paul defines faith to be "the substance of things hoped for; the evidence of things not seen."* Jesus acknowledged, as has been observed, that it was through the power of faith that he wrought his wonderful works among the people; and he told his disciples that if they had sufficient faith nothing would be impossible unto them.† "According to your faith be it unto you," said he to the blind, the sick, the hungry, and the impoverished. By the power of faith the dead were raised, epileptics cured, water turned into wine, and a multitude of hungry people amply fed from five loaves of bread and two small fishes. And when he failed to perform these marvelous deeds, which sometimes was the case, the cause of the failure was justly ascribed to a want of faith: "And he did not many mighty works there [in his own country] because of their unbelief."‡

It is a common error among rationalists to suppose that faith as an element of human nature is confined to the infancy of the race, and that with the general diffusion of knowledge there is an inevitable decline in the use and efficacy of that power. This is

productive of good works than I have generally seen it; I mean real good works, works of kindness, charity, mercy, and public spirit; not holy-day keeping, sermon-reading or hearing; performing church-ceremonies, or making long prayers filled with flattering compliments, despised even by wise men, and much less pleasing to God. . . . But nowadays we have scarce a little parson that does not think it the duty of every man within his reach to sit under his petty ministrations, and that whoever omits them offends God."—*Franklin's Memoirs and Private Correspondence*, vol. iii.

* Heb. xi. 1.

† Matt. xvii. 20.

‡ Matt. xiii. 58.

true only in so far as credulity is allied to the higher and diviner element of faith. "A man," says Emerson, "bears beliefs as a tree bears apples." In the higher and nobler sense, the power and influence of faith actually increase with knowledge. The scientific mind has a deeper sense of the miraculous than has that of the savage, for to the former all nature is one vast miracle. No phenomenon in nature is grander than the simple trust of the husbandman in sowing his seed, or of the manufacturer in anticipating and forestalling the material wants of the people; or of the philosopher, in his confidence in the instruments and methods of science, by which a planet is weighed, a solar ray analyzed, or the chemical composition of the stellar universe determined upon.* The blind, unreasoning credulity of ignorance, which "sees God in the clouds and hears him in the wind," is surely a lower manifestation of faith than that which establishes the "Signal Service," and determines beforehand the rise and course of rain and wind. Faith in "scapegoats," and the voice from Sinai, may be very beautiful in its way, but the faith in truth, and "the still, small voice" within, is a much finer exhibition of that element. The faith of Elijah, by which he was enabled to bring fire from heaven to consume wood and stone, and even to lick up

* "'Tis a short sight to limit our faith in laws to those of gravity, of chemistry, of botany, and so forth. Those laws do not stop when our eyes lose them, but push the same geometry and chemistry up into the invisible plane of social and rational life, so that, look where you will, in a boy's game, or in the strife of races, a perfect reaction, a perpetual judgment, keeps watch and ward. And this appears in a class of facts which concerns all men within and above their creeds."—*Emerson's Conduct of Life*, p. 191.

the dust and water, is less brilliant than that which enthused Mr. Field to prosecute the Atlantic-cable project, or Franklin to seize upon the electric fire in the storm-cloud, and demonstrate its identity with electricity. Faith not only gives efficacy to prayer, and power to the cross, and converts beads and baptism, fasts and feasts, symbols and sacrifices, into spiritual agencies, but it is the power behind civilization, the force which impels the cultivation of the arts and sciences, and inspires man to trust the unseen for blessings which he cannot foreknow, but for which he patiently labors and waits. Faith is the foundation of industry, and is illustrated no less in the coral, which patiently builds its reefs, or in the bee, which industriously secretes its wax and collects its honey, than in him who harvests the wisdom of the world and builds up its grand industries, religions, and philosophies.

The power and influence of faith in religious epidemics cannot have escaped the observation of any one. Among the ignorant or unscrupulous, it is a power, as we have observed in the previous chapter, as potent for mischief as typhus or "yellow jack." Its influence in medicine is well known to the profession; and it affords the quack or pretender a fruitful field in which to ply his art. In curing the sick it surely is often more potent than the best selected remedy; and he is sometimes the most skillful who deigns not to take advantage of its kindly aid. The story of the blindfolded criminal, who was bled to death by feigned venesection, is a good illustration of the power of faith over the vital processes. And Paris, in his "Life of Sir Humphry Davy," relates a remarkable illustration of the curative power of faith,

that came under the observation of Davy. A palsied man had been selected on whom it was proposed to try the effect of nitrous oxide. Previous to the trial of the gas, Sir Humphry placed a small thermometer in the mouth of the patient to ascertain the bodily temperature. The paralytic, wholly ignorant of the process to which he was about to be subjected, but having been deeply impressed "with the certainty of its success, no sooner felt the thermometer between his teeth than he concluded the talisman was in operation, and, in a burst of enthusiasm, declared that he already experienced the effects of its benign influence throughout his whole body." The administration of the gas was accordingly deferred, and, in its stead, daily repetition of the experiment with the thermometer resorted to with the most gratifying results. "At the end of two weeks he was dismissed cured,—no remedy of any kind, except the thermometer, having ever been used."*

Another remarkable instance of this power is quoted by Dr. Combe from Dr. Johnson, who in turn quotes it from F. V. Mye's "*De Morbis et Symptomatibus*." At the siege of Buda in 1625, "when the garrison was on the point of surrendering from the ravages of scurvy, a few vials of sham-medicine, introduced by the Prince of Orange's orders, as a most valuable and infallible specific, and given in drops as such, produced astonishing effects: 'Such as had not moved their limbs for months before, were seen walking in the streets, sound, straight, and whole; and many, who declared they had been rendered worse by

* Paris's Life of Davy, p. 51.

all former remedies, recovered in a few days, to their inexpressible joy.'"*

There can be no doubt but that much of the influence of a popular physician is effected through the medium of this faculty; as it is a notorious fact that the least learned practitioner is frequently the most successful physician. Baglivi has well said: "For a physician, powerful in speech and skilled in addressing the feelings of a patient, adds so much to the power of his remedies, and excites so much confidence in his treatment, as frequently to overcome dangerous diseases with very feeble remedies, which more learned doctors, languid and indifferent in speech, could not have cured with the best remedies that man could produce."†

CHEERFULNESS.

2. "A laugh," says Lamb, "is worth a hundred groans in any market." The exercise of a hopeful, cheerful mood is another moral tonic of indispensable efficacy. It also influences the corporeal functions in a marked manner. Cheerfulness promotes the circulation, warms the hands and feet, and relieves congested lungs and livers. Laughter is its natural language; and he who is incapable of a good hearty laugh is in danger of melancholia and a lunatic asylum. "Ten hearty laughs," says a popular writer,—"real shouts,—will do more to enhance the general health and vitality than an hour spent in the best gymnastic attitudes and motions, if done in a sober,

* *The Principles of Physiology*, p. 273.

† *Ibid.*, p. 273.

solemn spirit." "Laugh and grow fat," is an old-time maxim, full of sound physiological sense. And Solomon was cognizant of its truth when he wrote: "A merry heart doeth good like a medicine: but a broken spirit drieth the bones;" and again: "He that is of a merry heart hath a continual feast."* The opposite state of mind depresses the pulse, destroys appetite and digestion, poisons the secretions, and beclouds all the mental functions. "By sorrow of the heart the spirit is broken."†

The cultivation of a hopeful state of mind is essential to good cheer; for no human being can otherwise be joyful under the dark clouds of despondency. A lively sentiment of hope leads one to look forward, and beyond present adversity, trials, and difficulties. Present defeats and discomforts are but the necessary preludes, concomitants, to an ultimate success. Adversity is after all far more beneficent than prosperity; for without its shadows hope would cloy and inspiration die out from disuse. When clouds obscure the mental horizon, shutting out the glory of the perfect day, 'tis but temporary to the hopeful mind; and even then they have a silver lining; the soul is not enshrouded in utter darkness, nor left without some augury of hope and promise. Besides, the hopeful know that above the densest cloud the sun is always shining with undiminished splendor; and he who is actuated by a proper degree of hope finds enough of light and sunshine somewhere in the universe to enliven and vivify the darkest and most joyless day of earth. Campbell has well sung of hope:

* Proverbs xvii. 22, xv. 15.

† Proverbs xv. 13.

"Eternal hope! when yonder spheres sublime
Pealed their first notes to sound the march of time,
Thy joyous youth began—but not to fade—
When all the sister planets have decayed:
When wrapt in fire the realms of ether glow,
And heaven's last thunder shakes the world below;
Thou, undismayed, shall o'er the ruins smile,
And light thy torch at nature's funeral pile."*

TEMPERANCE.

3. Temperance, as a law of the economy, is as applicable to psychical as to corporeal indulgences. Every function has its natural limit, beyond which its exercise is productive of harm. "Be ye temperate in all things," said St. Paul. And that sage apostle of Christianity reckoned temperance among the "fruits of the Spirit." In this, its true sense, temperance is allied to prudence; and it should stand guard over every act, word, impulse, thought of our life. Temperance should be our mentor, ever at our side, prompting, checking, and guiding the tempestuous impulses and appetites of the heart and mind. Under its guidance, excesses in eating and drinking will be avoided; the passions trained and kept within their proper sphere and limit of activity; unchastity repressed; the emotions of the heart carefully guarded against abuse and undue influence in the character; the various exercises and labors of the intellect confined within equitable limits; and the indulgence of religious rites and ceremonies, fastings, prayers, penances, oblations, reflections, with the accompanying depressing emotions, carefully guarded against unhappy and disastrous excesses.

* The Pleasures of Hope.

Excess of piety has its evils, no less riotous living or immoral conduct. I knew a man who spent most of his time in prayer. He thought he was serving God. If he were, God surely did not requite the service, for he was soon taken to a lunatic asylum and his family sent to the county-house. Serving the devil could not have been more disastrous to either his family or himself. Excess of prayer, then, as excess of any other special function of the mind, is positively sinful and demoralizing, since it not only leads to mental perversion, if not absolute lunacy, but robs the other mental gifts of their saving qualities. The wise man said there was "a time for everything." Temperance says, Let everything have its own time. Thus shall the divine in man be unfolded, and human nature fulfil its bounteous, glorious destiny!

MUSIC.

4. The influence of music on the mind and vital functions is scarcely second to that of cheerfulness. The emotions it excites in the mind are among the most pleasing and salutary. This, indeed, would be inferred from the general good health and long life which usually obtains among the lovers of the art, and especially among the masters in the musical profession. Music is a medicinal agent of very great efficacy in certain diseases. Dr. Rush advises it in many forms of madness.* It elevates, calms, and soothes the emotions, and promotes vigor and harmony of the corporeal functions. A high order of musical culture is incompatible with any considerable

* The Diseases of the Mind.

degree of immorality; and its cultivation must be regarded as prophylactic to the lawless and groveling tendency in human nature. Shakspeare has denounced those who are insensible to the charms of music as only "fit for treason, stratagems, and spoils."

"Vocal music," says Mr. Graham, "ought to be as universal a branch of education as reading and writing, and instrumental music should be almost as extensively cultivated." He regards the practice of music and dancing, and the social enjoyment founded on them, as "more favorable to good health, sound morality, and true religion, than perhaps any other known in society." And he very sensibly adds:* "If music, marching, and dancing constituted a part of the regular exercises of all our colleges, theological seminaries, and other literary and scientific institutions, immense benefits would result not only to those institutions but to society at large. Thousands who now pass from the place of learning to years of misery and an untimely grave could be preserved in health, and live to be blessed and to bless mankind by their usefulness."

ART.

5. The study of the fine arts in general is particularly elevating in its tendency. Aside from music, there are drawing, painting, engraving, sculpture, etc., the cultivation of which draws the mind away from self and selfish gratification to the study and contemplation of the wonderful works and processes of nature. In vain is urged the excuse of a want of time and

* The Science of Human Life, secs. 1626-7.

opportunity. It is the will alone that is wanting. The time which men devote to the vulgar gossip of the lager beer saloon, or idle away over the fragrant Havana, and which women waste over their morning and evening toilette, or spend in answering the demands of a formal and frivolous etiquette, is quite sufficient in either sex to acquire proficiency in any of those beautiful and soul-inspiring accomplishments. The enjoyment afforded by their cultivation, and the ennobling impetus they give to the mental energies, are ample rewards for the time devoted to them.

LANGUAGE AND CONVERSATION.

6. The study of language and conversation occupies no inferior place in mental culture. "Language," says Coleridge, "is the armory of the human mind, and at once contains the trophies of its past and the weapon of its future conquests." Language deserves a high place among the fine arts. It comprehends both science and art,—science in the arrangement of words and sentences; art in the skill of speech and expression. Conversation, however, while comprehending both, is something different from either. To converse in an entertaining manner requires a thoroughly disciplined mind. There must be a high order of intellect; an accurate, well-stored memory; imagination; wit; the moral graces,—politeness, affability, good humor, etc.; a combination of mental qualities by no means common. The art of communicating, in articulate speech, the thoughts and feelings with precision, fluency, and elegance, is an accomplishment worthy man's best efforts to acquire. Its possession advances

one to the first rank in civilized society. Madame Récamier has left to the world an enduring renown by her wonderful powers of conversation alone. The art is one of the noblest of which human nature is susceptible ; its cultivation a duty which cannot be too forcibly enjoined upon the young. If our institutions of learning would teach language less and conversation more, they would supply more fully the wants of society and of civilization. " Many persons," says Bronson, " take great pains with their dress, to appear well and attract attention ; but if they would cultivate their language, and the proper way of using it, so as not to deform themselves in reading and conversation, they might accomplish the object at which they aim."

LITERATURE.

7. The study of literature affords one of the most effective means of engaging mental energies that might otherwise run to waste, or spend themselves in an unwholesome or demoralizing direction. It is a better antidote for sorrow or disappointment than alcohol or opium. The field it opens up to the mind is ample for the exercise of the largest capacity and of the rarest gifts ; and some of our most distinguished writers have cultivated it as an effective solace for an incurable grief. If it be impracticable to avail one's self of the mental discipline which methodical composition affords, a salutary diversion of the mind may be found in the study of the writings of the masters. These are works of nature, be it remembered, in the purest and highest forms ; and in their study and contemplation the noblest aspirations of the mind find

gratification and delight. Intimate converse with these, the best thoughts of poets, philosophers, essayists, and novelists, brings the soul into as close a communion with the divine mind as it is possible for a mortal being to be brought on earth.

The mental character is largely influenced by association. Consciously or unconsciously the ideas, opinions, and feelings of favorite authors are assimilated and become a part of us. So true is this, in general, that the quality of the literature given the child largely determines the character of the man. To him who reads much, the influence of books is more potent than that of companions. If one is known by the company he keeps, surely the books he reads furnish a far more reliable key to his character. This fact was early recognized by the fathers in the Christian church; and so long as the authority of the church was supreme over the conscience of the people, it continued to exercise a most vigilant surveillance upon literature, and to suppress with a strong, relentless hand whatever, in its judgment, was prejudicial to the church and the highest interests of mankind. If this ungenerous restriction upon literature had not been removed, the dark ages would have continued indefinitely, and mankind divided into patron saints and condemned heretics.

The church did not over-estimate the influence of literature. It did over-estimate its own privileges, sagacity, wisdom, and failed, signally, in the interpretation and rightful use of them. It is desirable of course that the young should be carefully guarded against the influence of impure and unchaste publications. Books and periodicals inculcating a healthy sentiment, cheer-

fulness, good humor, and a wholesome morality, should be selected for children, of a style, in other respects, in keeping with their years and peculiarities of taste. Further than this it is unwise to go. The young mind should be permitted to develop absolutely untrammelled in respect to opinions concerning politics, religion, philosophy, etc. Maturity would find such a person comparatively free from bias or prejudice, with a judgment more impartial respecting the merits and demerits of the conflicting and opposing systems of religion and philosophy, and a higher love, respect, and perception of truth and right. The grand desideratum in training the young mind is to teach it *how* to think, rather than *what* to think; to develop ideas, rather than opinions. Fools have a plethora of opinions; the wise, of ideas and judgment.

If I were to express an opinion in regard to the comparative usefulness of the various kinds of light literature, it would be in favor of biography. "It is the life of a man," says Bulwer, "that it does good to manhood itself to contemplate."* Example is stronger than precept; and no one, be his age and circumstances what they may, can read the record of a noble life and not be inspired by it to nobler effort in his own behalf. Such lives are full of lessons of useful experience; patient industry; moral courage in defeat, privation, and misfortune; honor, virtue, magnanimity, etc., with the accompanying rewards and compensations. Nothing in story awakens in the youthful mind a livelier enthusiasm to be, to do, and to dare in like manner. This is the true office and purpose of all

* The Caxtons.

biography worthy a place in literature ; and, surely, none other deserves a place in our regard and memory.

The scientific interest of biography, psychologically considered, can hardly be overrated. "As the business of a man in the world is action of some kind," says Maudsley, "and as his action undoubtedly results from the relations between him and his surroundings, it is plain that biography, which estimates both the individual and his circumstances, and displays their reactions, can alone give adequate account of the man. What was the mortal's force of character, what was the force of circumstances, how he struggled with them, and how he was affected by them,—what was the life-product under the particular conditions of its evolution? these are the questions which a good biography aspires to answer. It regards man as a concrete being; acknowledges the difference between men in characters and capabilities, recognizes the helpful or baneful influence of surroundings, and patiently unfolds the texture of life as the inevitable result of the elements out of which, and the conditions under which, it has been worked. It is, in fact, the application of positive science to human life, and the necessary consequence of the progress of the inductive philosophy [method]. No marvel then that biography forms so large a part of the literature of the day; and that novels, its more or less faithful mirrors, are in so great request. The instincts of mankind are here, as heretofore, in advance of systematic knowledge or method."*

* *Physiology and Pathology of the Mind*, pp. 8-9.

LOVE.

8. "Nothing," says Horne, "more excites to everything noble and generous than virtuous love." Love, in its highest and noblest form, *is* a genuine inspiration to all that is noble and ennobling in human life. It enlivens all the emotions, and warms and cheers and strengthens the heart, when all the other sentiments are powerless or inoperative. "Love," said Petrarch, "is the crowning of grace and humanity; the holiest right of the soul; the golden link which binds us to duty and truth; the redeeming principle that chiefly reconciles the heart to life, and is prophetic of eternal good." Love is the essence of religion. Its fullness and perfection escape the ken of groveling mortals, and are only revealed to the noble and self-sacrificing. "Take away love, and not physical nature only, but the heart of the moral world, would be palsied," says Southey. And Terence has observed, that "it is possible that a man can be so changed by love that one cannot recognize him to be the same person." The elevating and transforming influence of sincere affection for all that is good and beautiful in woman may be observed on every hand, and amply justifies its classification among the agents of moral hygiene; for its existence is as essential to the beauty and comeliness of body and mind as it is to the perfection of the heart and soul.

In sentiment, a pure love is allied to worship. Cowley has given noble utterance to this phase of love in these lines to his love:

"Thou robb'st my days of business and delights;
Of sleep thou robb'st my nights.

Ah, lovely thief, what wilt thou do?
What! rob me of my heaven, too?
Thou even my prayers dost steal from me,
And I, with wild idolatry,
Begin to God and end them all to thee."

No one capable of sustaining an affection of this order can be wholly bad. Indeed, there is no room for unworthy emotions and desires in a heart thoroughly imbued with an exalted love for a superior being. Every consideration of interest, duty, honor, fidelity, etc., conspire to lift such a one above the low plane of mean and groveling temptation, to an atmosphere of purity, goodness, and truthfulness. Love is, truly, "the fulfilling of the law," and one of the finest inspirations and needs of every noble heart. No considerable degree of health, happiness, or mental balance is possible without its active cultivation. Neglect to cultivate the sentiment is parent of many of the bodily and mental evils, and swells the tide of human wretchedness which afflicts mankind. As the moral influence of this passion is considered at some length in the following chapter, I forbear to give it here more than this passing reference.

FRIENDSHIP.

9. The cultivation of friendship adds largely to the sum of regenerating influences. The affection which sometimes springs up between individuals of congenial tastes and temperaments, and denominated friendship, is but another form of love. Its influence upon the character, when pure and unselfish, is elevating and ennobling, imparting joys and quickening emotions peculiarly its own. "Beautiful and noble characters,"

says Mr. Alger,* "can find nothing so enchanting as a beautiful and noble character." In the relation of two or more persons, between whom the strong tie of an unselfish friendship exists, may be found in active operation the diviner elements of human nature. Each forgets himself in promoting the welfare of the others. They live for each other's good; and in doing so they all reap the benefits which accrue as the lasting reward of the exercise of disinterested purposes. Surely no pleasure is equal to that we receive in giving pleasure to others.† To many persons, friendship is a moral necessity; life would be unbearable without its genial, vivifying influence. "I cannot be happy," says De Tocqueville, "or even calm, unless I meet with the sympathy and encouragement of some of my fellow-creatures." Society is indeed made for man; and he who seeks seclusion, draws away from his fellow-creatures, and refuses to seek in others what he can never, unaided, find in himself, curtails his joys, and dries up some of the most prolific fountains of life and energy. Friendship is among the most prominent of these living fountains; "since the very ground and gist of a noble friendship is the cultivation in common of the personal inner lives of those who partake in it, their mutual reflection of souls and just sharing of experience inciting them to a constant betterment of their being and their happiness."‡ All the loves of the heart are, in truth, when exercised on worthy objects, as companions, friends, children, good-

* The Friendships of Women.

† "It should never be forgotten that the most delicate and enduring pleasures we enjoy are those we give."—*W. R. Alger*.

‡ The Friendships of Women, p. 10.

ness, beauty, etc., in an active degree health-promoting and spiritually elevating in their tendency.

SOCIETY.

10. Society affords the individual another resource of health, corporeal and mental. "It is not good for man to be alone," says the allegory of creation; and it is as true to-day as it was in the beginning. The hermit, or recluse, in withdrawing himself from the society of his fellow-creatures, is deprived of many of the finer stimuli which are necessary to the full and complete unfolding of the moral character. It is impossible for a human soul, with its varied and complex powers and susceptibilities, to thrive in a condition of isolation. Man is as truly dependent on his fellows for approval and sympathy as are the flowers on the dews and sunbeams for life and beauty. Active participation in the various interests and business of life gives zest and healthful activity to powers which would otherwise run to waste, or worse than waste—to disease. Moreover, it is indispensable to the cure of the numerous ills and misfortunes which arise, in good part, from having nothing to do,—of those diseases whose very existence—we may say essence—is perversion of the imagination, and which is manifested in the indulgence of fancied wrongs and grievances, brooding in solitude over griefs and disappointments, the embers of which are kept alive by the morbid murmurings of the patient's own isolated heart. No wrongs are so hard to redress as fancied wrongs; no diseases so difficult to cure as those of the imagination. Doctors and priests, with physic and litany, swarm around these patients and grow fat with

the pickings, giving never so much as a word of advice or intimation to indicate the comprehension of their causes, or a rational method for their removal! The true specific for such woes is society, and an active sympathy and co-operation in society's work and recreation. Society is nature's great moral laboratory, moral workshop, where every soul may find congenial work and an ample opportunity to exercise and develop every gift with which it has been wisely endowed. "To complain that life has no joys," says Fitzosborne, "while there is a single creature whom we can relieve by our bounty, assist by our counsels, or enliven by our presence, is to lament the loss of that which we possess; and is just as irrational as to die of thirst with the cup in our hands."

INDUSTRY.

11. Industry is by no means least among the agents of mental hygiene. "An idle brain is the devil's workshop," some one has pertinently said. He who has nothing to do, nothing to enlist the energy of arm or brain, is a prey to more devils than Christian theology has the credit of inventing. "A busy man is troubled with but one devil, but the idle man with a thousand," says an old proverb. And another still more trite says: "Men are usually tempted by the devil, but an idle man positively tempts the devil." Dr. Todd, writing for students, observes: "There is no state so bad for the student as idleness, and no habit so pernicious. And yet none is more easily acquired or so difficult to be thrown off. The idle man soon grows torpid, and becomes the Indian in his feelings, insensibly adopting their maxim: 'It is better to walk than

to run, and better to stand still than to walk, and better to sit than to stand, and better to lie down than to sit.' Probably the man who deserves the most of pity is he who is the most idle; for, as 'there are said to be pleasures to madness known only to madmen, there are certainly miseries in idleness which only the idle can conceive.'"*

"Every man's task is his life preserver," says Emerson. Industry is a greater educator and disciplinarian of one's faculties than the common school or Christian pulpit. Its influence upon the character is twofold. *First*: It is the means of vitalizing the blood and of exciting nutrition, growth, and energy in the economy, without which great excellence in any direction is unattainable. *Second*: It gives employment, wholesome and elevating, to energies which are liable to be diverted into vitiating channels. Industry, in effect, puts morbid impulses into harness, and compels them to work in the interest of God and humanity. Industry is but another name for virtue, probity, honor. The percentage of crime is very small among the working population; not that they are any better by nature than the rest of mankind, but because their wayward and mischievous impulses are consumed in their work, are correlated into virtuous toil—into industry.

POVERTY.

12. Poverty is the usual incentive to industry; and it would be more philosophical perhaps to speak of it as a condition rather than an agent. I have already

* Student's Manual, p. 54.

referred to the incompatibility of superior morality and great affluence. Every man born in poverty has great reason for thankfulness; for poverty means both incentive and opportunity. "In the sweat of thy face shalt thou eat bread," says the fable; and what was meant as a curse man has turned into a blessing in every department, and in every field of human endeavor. "It is easier for a camel to go through the eye of a needle," said Christ, "than for a rich man to enter into the kingdom of God." "Necessity is the mother of invention:" man is so constituted that but for the stimulus of poverty to impel him to exertion, he would, in most cases, sink into physical and moral apathy. "Steep and craggy is the path of the gods," said Porphyry. "Take it for granted," says Wirt, "that there is no excellence without great labor;" and the excellence which attends great labor would never be forthcoming were it not for the wise disposition of nature and circumstance, which compels every man worthy the name of man to help himself.

Moreover, affluence is morally certain to breed indolence; to encourage the growth of selfishness; to remove one from the moral school of suffering and privation; and to render one oblivious of duty and obligation. He who has never known poverty and privation is rarely capable of fully sympathizing with the vast majority of God's creatures; and that is a misfortune, compared with which the mere absence of material wealth is insignificant indeed. "I have known many rich people in my time," writes Miss Mitford,* "and the result has convinced me that with great wealth

* Field's Yesterdays with Authors.

some deep black shadow is as sure to walk as it is to follow the bright sunshine. So I never pray for more than the blessed enough for those whom I love best." Surely, the evils of riches and the blessings of poverty are too manifest to require in this place more than this passing reference. Wealth would be shorn of much of its baleful influence if it came as the reward of personal industry; indeed it is, when otherwise obtained, more often a positive injury and misfortune.*

PRAYER.

13. Prayer is one of the chief elements of religious exercises,† and a valuable specific in mental hygiene. I am aware that it is unusual to class the exercise of prayer among the hygienic agents; but that indicates an incomprehensive philosophy of health and life rather than a disbelief in the moral and hygienic efficacy of that exercise.

The desire to pray; to supplicate the Supreme Being; to lift the soul, with all its cares and wants to him, is alone peculiar to man. It is an instinctive recognition of our dependent condition and complete subjection to powers unseen and superior to our own. In prosperity, freedom from disease and pestilence, with a sufficiency of this world's goods to supply his wants and those of his household, man is too often indifferent to this spiritual need. In adversity, how-

* "He who aims high must dread an easy home and popular manners. Heaven sometimes hedges a rare character about with ungainliness and odium, as the bur that protects the fruit. If there is any great and good thing in store for you, it will not come at the first or the second call, nor in the shape of fashion, ease, and city drawing-rooms."—*Emerson on Culture*.

† "Prayer and religion are one and inseparable."—*Hodge*.

ever, the most irreverent and unreflecting are not unfrequently the first to find a ready resource in prayer. It is usually the first exhibition of cowardice in calamity, for which perverse people are distinguished.

The faculty in which the sense of prayer and obligation originates is in the cerebrum, and is the highest development of the moral brain. It gives strength of moral character; elevation of mind; a reverent and respectful demeanor; calm submission to the inevitable, as if it were the clear will of Deity; a patient, trustful disposition; an adoring, worshipful state of mind; the desire, so strong in all very good people and some very bad ones, to hold silent and peaceful converse and communion with the spirit; and that admirable quality of mind which distinguishes the noblest specimens of human nature, viz., moral courage. Through this faculty man is made acquainted with the existence of his Maker and the spiritual relation which he sustains to him. An individual in whom the faculty predominates *feels* the reality of that relation without the aid of reason, and in spite of all the adverse deductions of reason. It is the inspiration of an innate sense, a consciousness which needs no demonstration; which, in fact, is above outward demonstration, just as any self-evident fact in nature, our existence for example, is above demonstration, and must be received on the evidence of the senses alone.

Prayer is the natural language of this noble and elevating faculty, the legitimate exercise of a beautiful and sublime gift. Pope has given grand utterance to the spirit of prayer in his "Universal Prayer":

* * * * *

"Thou Great First Cause, least understood,
 Who all my sense confined
 To know but this, that thou art good,
 And that myself am blind ;

* * * * *

"What conscience dictates to be done,
 Or warns me not to do,
 This, teach me more than hell to shun,
 That, more than heaven pursue.

* * * * *

"Teach me to feel another's woe,
 To hide the fault I see :
 That mercy I to others show,
 That mercy show to me."

Prayer may not always find expression in words,—these are sometimes too feeble to express the soul's inner longing for goodness and purity, for God. The most eloquent supplications may be voiceless, and indicated in the soul's absolute trust and confidence in the Supreme, as if to say, "Thy will be done."

The influence of this element upon the functions of organic life can hardly be over-estimated. It is a power in recovering from disease. It is also a potential prophylactic against the inception and cause of disease. The calm faith and trust and fortitude it inspires in the mind of its possessor are often more potent in serious maladies than the most discreet medication. It guards one against unhappy and destructive emotions ; it restrains the exercise of the passions ; soothes the selfish propensities ; and balances, harmonizes, and invigorates the nervous functions in general. The power of fervent supplication is so obvious in this respect, and frequently so immediately manifest as to give rise to the belief of a direct inter-

position of Deity in answer to prayer,—a belief most difficult to eradicate from the mind of a pious but illogical individual, since reason in such people is always inferior to inspiration. Let the *modus operandi* of its influence on man, however, be what it may, its exercise and cultivation are demanded by the highest considerations of physiology and mental hygiene. The perfection of mental health and manhood is obviously otherwise impossible.*

The philosophy of prayer, as viewed from the physiological stand-point, is so thoroughly consistent with sound sense that it commends itself to the mind of every rational or unprejudiced individual, be he believer or skeptic. "Ask, and it shall be given unto you," said Christ. Sincere, earnest prayer brings up from the depths within spiritual comfort and consolation, and many other spiritual blessings which the Father knows the soul has most need of. "Ask, and ye shall receive," is the requisite condition, and by complying with it the heart receives the needed good, in strict conformity to the laws of the organic processes.

* "Whoever believes in the existence of God should consider religion as the most important object of his reflections; and being personally concerned in this respect, his union with God should be left free from human authority, particularly from the spirit of those who have seized upon it as their particular property."—*Spurzheim's Phrenology*, vol. ii. p. 101.

"The man who cultivates his intellect and habitually obeys the precepts of Christianity will enjoy within himself a fountain of moral and intellectual happiness, which is the appropriate reward of that obedience. By these means he will be rendered more capable of studying, comprehending, and obeying the physical and organic laws, of placing himself in harmony with the whole order of creation, and of attaining the highest degree of perfection, and reaping the highest degree of happiness, of which human nature in this world is susceptible."—*Combe's Constitution of Man*, p. 23.

We do not pretend that this brief explanation of the *modus operandi* of prayer is consistent with the Bible view of human supplication. Indeed, the Bible distinctly teaches, what all believers in the literal interpretation of Scripture claim, and what the Christian churches universally adopt, that "all things whatsoever ye ask in prayer, believing, ye shall receive." And again said Christ, even more emphatic: "if two of you shall agree on earth as touching anything they shall ask, it shall be done for them by my Father which is in heaven." The prayer of Christ is said to have raised the dead, to have restored sight to the blind, health to the diseased, and, in several remarkable instances, to have arrested the laws of organic nature. And he promised his disciples that they should by similar means do even more marvelous works than these. The prediction seems to have been verified. In several instances the apostles are said to have healed the sick and raised the dead; and when Peter was in prison the prayers of the church unbarred his doors, etc. In the Old Testament the efficacy of prayer is attested in the arrest of the heavenly bodies, the production and dissipation of plagues and pestilence; in bringing down fire from heaven, suspending the ordinary course and procession of meteorological events, wresting victories in war, abating famine, etc. The Christian of to-day is exceedingly jealous of his influence with Deity in shaping the destiny of nature and human life. In drought, he prays for showers and the harvests; if disease and disaster threaten, he implores heaven to stay them; he invokes divine aid*

* See note at end of chapter.

in his profession; when engaged in war, he prays for victory—for the side he espouses, of course. And in our late civil war it was not uncommon to see both parties to the strife kneeling at the shrine of prayer, imploring divine favor for victory over the other. Nor is the Christian content to confine the exercise of his influence with the Deity to extraordinary occasions only. His voice is raised for kings, queens, presidents, "and all others in authority"; for the sick and the afflicted, the poor and the rich; in brief, "for all sorts and conditions of men,"—thus maintaining in form the extravagant pretensions of the early Christians and the heathens in general respecting the power and efficacy of prayer, and the absolute subjection of the material to the spiritual.

It is needless to observe that these extravagant claims respecting the influence of certain praying men over the divine mind are exceedingly impious. It exhibits among us the last stage of a decaying superstition. Being at variance with rational philosophy, the belief has been chiefly instrumental in unfortunately arraying science against religion, and has also been one of the principal causes of divisions and dissensions in the church itself. In Scotland, for example, in 1744, Rev. William Leechman, D.D., Principal and Professor of Divinity in the college of Glasgow, was prosecuted by the presbytery of that city for alleged heresy, in preaching doctrines concerning prayer at variance with those entertained by the church. He was condemned by the presbytery; but on appeal to the synod, that body strangely "found no reason to charge the said professor with any unsoundness in the faith," etc. "Since this decision," says Mr. George

Combe, "the views delivered by Professor Leechman have been unhesitatingly taught by Scotch divines."* It is interesting to observe that the views referred to comprehend the philosophy of prayer herein briefly expressed. "God is not subject," said the learned doctor in the sermon complained of, "to those sudden passions and emotions of mind which we feel; nor to any change of his measures and conduct by their influence; he is not wrought upon and changed by our prayers; for *with him there is no variableness nor shadow of turning*. Prayer only works its effect upon *us*, as it contributes to change the temper of *our* minds, to beget or improve right dispositions in them, to lay them open to the impressions of spiritual objects, and thus qualify us for receiving the favor and approbation of our Maker, and all those assistances which he has promised to those who call upon him in sincerity and in truth. The efficacy of prayer does not lie in the mere asking, but in its being the means of producing that frame of mind which qualifies us to receive."†

The Rev. Dr. Blair, of Scotland, another distinguished clergyman and author also, and a contemporary of Dr. Leechman, in a sermon "On the Unchangeableness of the Divine Nature," announced, substantially, the same doctrine. "To what purpose, it may be urged, is homage addressed to a Being whose purpose is unalterably fixed; to whom *our righteousness extendeth not*; whom by no arguments we can per-

* The Constitution of Man, p. 375.

† Dr. Leechman's Sermons, London, 1789. Sermon iii. p. 192. Ibid., p. 374.

suade, and by no supplications we can modify? The objection would have weight if our religious addresses were designed to work any alteration on God; either by giving him information of what he did not know, or by exciting affections which he did not possess; or by inducing him to change measures which he had previously formed. But they are crude and imperfect notions of religion which can suggest such ideas. The change which our religious devotions are intended to make is upon ourselves, not upon the Almighty. Their chief efficacy is derived from the good dispositions which they raise and cherish in the human soul. By pouring out pious sentiments and desires before God, by adoring his perfection and confessing our own unworthiness, by expressing our dependence on his aid, our gratitude for his past favors, our submission to his present will, our trust in his future mercy, we cultivate such affections as suit our place and station in the universe, and are thereby prepared for becoming objects of the divine grace.”*

Lord Kames, who, although a philosopher, was by no means a skeptic, advanced views respecting the philosophy of prayer in all respects similar: “The Being that made the world governs it by laws that are inflexible, because they are the best; and to imagine that he can be moved by prayers, oblations, or sacrifices, to vary his plan of government, is an impious thought, degrading the Deity to a level with ourselves.”†

These doctrines concerning the nature and offices

* Sermons, vol. ii. Ibid., p. 375.

† Sketches, b. iii., Sketch 3, chapter iii. § 1. Ibid., p. 376.

of prayer are identical with those held by the philosophers and reformed churchmen of to-day. They are thoroughly consistent with the reign of law and order in the universe, as opposed to arbitrary despotism and meddlesome interposition; the only ones consistent with supreme dignity and wisdom, and the best interests of human nature; for if man could have all things for the asking, the stimulus to exertion, except to pray,—to the answering our own prayers,—would be removed, and the end of industry would consequently be near. What the mind is most in need of from the influence of prayer, says Mr. O. B. Frothingham, “is balance, poise, serenity; the sense of rest in infinite powers; of repose on divine realities. It is the highest office of prayer to console and tranquilize the mind so that its waves of passion will subside on the bosom of the eternal deep.”*

These doctrines, it is objected, are unscriptural: undoubtedly. So much the worse is it for Scripture, or scriptural interpretation, or both. The truth of heaven is superior to prejudice, tradition, or Scripture; and when these conflict with it, they must either bend or break. And reason is the supreme umpire, arbiter, before whom the difference is to be adjudged. “Reason can, and ought to judge,” says the learned Bishop Butler, “not only of the meaning, but also of the morality and evidence of revelation.”† And again: “Let reason be kept to; and if any part of our scriptural account of the redemption of the world by Christ can be shown to be really contrary to it, let the

* *The Scientific Aspects of Prayer—a Sermon*, p. 21.

† *Analogy*, Part ii., chapter iii. p. 229. Bohn's edition.

Scriptures, in the name of God, be given up."* The exercise of such a spirit would put an end forever to the unnatural antagonism which has been so mistakenly maintained between science and religion, the material and the spiritual.†

NOTE.—Page 188.

The very able and distinguished author of "Study of Medicine," Dr. John Mason Good, left among his private papers the following beautiful prayer written out, which he was in the habit of repeating every morning before proceeding to engage in the exercise of his profession. It is printed in the last edition of his great work, "The Study of Medicine." The prayer and the example are both too noble to be buried in the oblivion of an obsolete work. I accordingly reproduce them here :

"O thou great Bestower of health, strength, and comfort! grant thy blessing upon the professional

* Analogy, Part ii., chapter iv. p. 256.

† Many years ago, the writer was once engaged in a public discussion of a question involving the scope of reason in human affairs. In the course of the debate, when his turn came to speak, he made bold to quote these and other extracts from Bishop Butler's "Analogy," presuming that an authority so distinguished as that learned divine would be of some importance in deciding in his favor the question at issue. When he had concluded, to his surprise and disgust, an orthodox clergyman arose, and with great solemnity and earnestness of manner declared that Butler's "Analogy" was one of his text-books; and that he was very glad to be able to say that no passages such as the gentleman had quoted were in it! Not having the book within reach, the writer was compelled to rest under the odium of perverting the bishop's language in the interest of his argument! Nor was it an easy *rest*.

duties in which I may this day engage. Give me judgment to discern disease, and skill to treat it; and crown with thy favor the means that may be devised for recovery; for, with thine assistance, the humblest instrument may succeed; as, without it, the ablest must prove unavailing.

“Save me from all sordid motives; and endow me with a spirit of pity and liberality towards the poor, and of tenderness and sympathy towards all: that I may enter into the various feelings by which they are respectively tried; may weep with those that weep, and rejoice with those that rejoice.

“And sanctify thou their souls, as well as heal their bodies. Let faith and patience, and every Christian virtue they are called upon to exercise, have their perfect work: so that, in the gracious dealings of thy Spirit and of thy providence, they may find in the end, whatever that end may be, that it has been good for them to have been afflicted.

“Grant this, O heavenly Father, for the love of that adorable Redeemer who, while on earth, went about doing good, and now ever liveth to make intercession for us in heaven. Amen.”

CHAPTER VI.

MARRIAGE.

"It is in the need of loving and of being loved that the highest instincts of our nature are first revealed."—*Henry Thomas Buckle.*

TRUE marriage is the complete evolution of conjugal love. Love may subsist without marriage, but no true marriage is possible without love. In thus distinguishing at the outset between *true* and *false* marriage, I do but conform to the average comprehension of the subject. The terms have crept into its nomenclature unbidden, and been received by many with unfeigned reluctance, and yet with a persuasion before which all doctrinal myths were as vapor before the rising sun.

The union contemplated in marriage finds its warrant and necessity in man's mental constitution. It exists independent of reason or expediency, and comprehends both in the orderly appointment of the family. No man reaches the fullness of manhood without marriage; and no woman attains the glory of womanhood unchastened by its divine influence. Wedded love, in its highest form, is the perfection of the divine ideal in the relationship of the male and female. It constitutes that union spoken of in the Hebrew Scriptures, in which the twain are one flesh. "What marriage may be," says the late John Stuart Mill, "in the case of

two persons of cultivated faculties, identical in opinion and purpose, between whom there exists that best kind of equality, similarity of powers and capacities with reciprocal superiority in them,—so that each can enjoy the luxury of looking up to the other, and can have alternately the pleasure of leading and of being led in the path of development,—I will not attempt to describe. To those who can conceive it, there is no need; to those who cannot, it would appear the dream of an enthusiast. . . . But I maintain,” he continues, “with the profoundest conviction, that this, and this only, is the ideal marriage; and that all opinions, customs, and institutions which favor any other notion of it, or turn the conceptions and aspirations connected with it into any other direction, by whatever pretenses they may be colored, are relics of primitive barbarism.”* “In marriage,” says the clever authoress of “John Halifax,” “there must be perfect unity; one aim, one faith, one love, or the marriage is incomplete, unholy—a mere civil contract and no more.”

Rev. W. R. Alger, in his fine book, “The Friendships of Women,” has given an excellent pen-sketch of the conjugal sentiment. He writes:† “Other things being equal, affection, wedded under every legal and moral sanction, reaches the highest climax, and is the most complete and enduring. Every failure implies some defect in the conditions. The readiness, in general, of illicit love to admit a substitute; its facility of consolation and forgetfulness when any fatal calamity has removed its object, demonstrates

* The Subjection of Woman, p. 177.

† The Friendships of Women, p. 107.

both its lower origin and its baser nature. In a well-consorted marriage, the soul, the mind, esteem and faith, the pure strain of friendship, enter more largely. The grave is not the boundary of its function. After death the love is cherished in the ideal life of the mind as vividly as ever and with an added sanctity. Widowed memory clings to the disconsolate happiness of sitting by the fountain of oblivion and drawing up the sunken treasure. If, as Statius said, to love the living be a pleasant indulgence, to love the dead is a religious duty:

“‘ Vivam amare voluptas; defunctam religio.’”

Theodore Parker regarded marriage as a “spiritual affair” as well as a corporeal; and maintained that the spirit of one sex “is incomplete without the other.”*

Such, in brief, is the abstract or psychological conception of true marriage. According to the canons of the Roman Catholic church, marriage is a sacrament: a union of one man with one woman, effected, in the absence of canonical disabilities, by the priestly sanction and blessing,—the chief requisite being a merely sexual one. In law, marriage is a civil contract between one man and one woman competent to contract, founded upon mutual consent,—nothing more.

But neither the political, canonical, nor the psychological nature and conception of the marital relation concerns, strictly speaking, the purpose of my essay. That purpose comprehends some of the moral and physiological problems of marriage, rather than its essential nature.

The influence of marriage upon the character of an

* Life and Correspondence of Theodore Parker, vol. i. p. 386.

individual, and through the individual upon the well-being of society, can hardly be overrated. Marriage is the foundation of the family. The moral status of the latter is derived from that of the former. If the family be legitimately grounded in the laws of conjugal order and mutual fitness, its influence is incalculably beneficent. If the family, on the other hand, be constituted upon ill-assorted, discordant wedlock, its baleful influence is far-reaching and damning; diffusing the elements of disease and of moral disorder to its remotest branches. The law of cause and effect is peculiarly operative in the marriage and family relation. As well expect pure water to flow from impure fountains, as domestic peace, prosperity and a pure progeny from discordant wedlock. While congenial wedlock is a perpetual inspiration to virtuous ends and deeds, and dispenses peace and joy and blessedness to all within the circle of its influence, ill-conditioned wedlock incites to discord and to disappointment, with their accompanying vexations and morbid tendency. "It is hardly possible," says Mill, "for one who is in these bonds to attain exalted virtue;"* and, I may safely add, to retain it, if once acquired.

The *rationale* of the influence of conjugal love in marriage on the individual is not far to seek. True marriage ennobles the instincts, and exalts the finer and nobler elements of one's being. It is the natural antidote of passion and sensuality; for the higher elements of mind, as veneration, ideality, kindness, gentleness, generosity, patience, conscientiousness, etc.,

* The Subjection of Woman, p. 166.

are continually exercised toward the object of conjugal affection. All the great centres of animal and spiritual life are called into healthful activity; precluding undue vital concentration upon any special function, and preserving that great desideratum and concomitant of culture, mental balance. The married state is the only normal, natural condition, for the rightly constituted individual. In that relation, when harmonious, the heart with its desires, longings, and aspirations, is perpetually ministered unto. Life is a continuous blessing in the heart and home, although storms and vexations may possibly prevail without.

Washington Irving truly says: "And, indeed, I have observed that a married man falling into misfortune is more apt to retain his situation in the world than a single one; partly because he is more stimulated to exertion by the necessities of the helpless and beloved beings who depend upon him for subsistence, but chiefly because his spirits are soothed and relieved by domestic endearment, and his self-respect kept alive by finding that though all abroad is darkness and humiliation, yet there is still a little world of love at home of which he is the monarch. Whereas a single man is apt to run to waste and self-neglect; to fancy himself lonely and abandoned, and his heart to fall to ruin like some deserted mansion, for want of an inhabitant."*

An old gentleman, who, early in life, had struggled with misfortune and poverty, remarked to the writer that after marriage he was perfectly happy in the humble log-hut which he had rudely constructed for their

* Sketch Book, ii. p. 35.

dwelling-place. The mutual love and contentment which they enjoyed more than compensated for being deprived of the luxuries which his more affluent neighbors possessed, but with a joyless love. "Better is a dinner of herbs where love is, than a stalled ox and hatred therewith."*

Moreover, a well-grounded love rounds off the angularities of the character, soothes the irritable-minded, and chastens and adorns the spirit; develops sweetness, amiability, gentleness, and promotes self-consecration, where before may have existed sourness, irritability, and selfishness. It promotes harmony of mental development, adds to the amenities, and modifies mental eccentricities; augments urbanity, and breaks down moral crotchets and acerbities. How often are these good effects observed in married people! Two pictures in my possession of a late lady friend, one taken before, the other after, the affections were betrothed, exhibit these contrasts in a striking manner.

It is this influence upon individual character and destiny that gives to true marriage its real charm and peculiar sacredness. Nor does it decay and weaken with the lapse of time. The mystic stream of sympathy which perpetually flows between souls thus united cannot be measured by physical tests nor earthly interests. It springs from spiritual sources, deep and subtle as life itself. "The conditions," says Mr. Alger, "that originally inspired the confiding and admiring sympathy, become, with the lapse of time and the progress of acquaintance, more pronounced

* Proverbs xv. 17.

and more adequate, and insure a union ever fonder and more blent,"* The influence which they exert over the life of each other is correspondingly increased, and grows more noble and more elevating. How rare it is to find moral obliquity in congenial wedlock!

Sir James Mackintosh's beautiful tribute to his wife belongs more to the blessed relation which they sustained to each other, than to that noble woman personally. He says: "She gently reclaimed me from dissipation; propped my weak and irresolute nature; urged my indolence to all the exertion that has been useful and creditable to me; and was perpetually at hand to admonish my heedlessness or improvidence. In her solicitude for my interests, she never for a moment forgot my feelings or character." The great-minded Melancthon acknowledges his indebtedness to a similar influence on the part of his wife Catherine, whom he was induced to marry against his judgment and inclination, and whom he finally came to love in spite of his religious training and life-long convictions. The late J. S. Mill also pays his beloved and accomplished wife a like tribute.†

"There are naturès," says George Eliot, "in which, if they love us, we are conscious of having a sort of baptism and consecration. They bind us over to rectitude and purity by their pure belief about us; and our sins become that worst kind of sacrilege which tears down the invisible altar of trust."‡ Many a young man dates his reclamation from a career of dissolute-

* The Friendships of Women, p. 88. † Essay on Liberty (Dedication).

‡ Middlemarch, vol. ii. p. 383.

ness and immorality to one of purity and usefulness, from the time his love was sincerely awakened. Men have been reclaimed from drunkenness, sensuality, reckless profligacy, and nameless petty vices and misdemeanors, by devoutly loving a woman of noble tastes and sympathies,—so closely is love allied to worship and religious sentiment. And two instances have come to my knowledge of two pairs, mutually disreputable, marrying, and leading reputable lives thereafter. Indeed, love is the turning-point in the lives of some men; the point of departure into ways of virtue and respectability, or of reckless shame and dissipation. Others are mere boys in mental growth and judgment until married, and in many instances would otherwise remain so if they lived a century!

The influence of marriage upon health and longevity has recently received some attention in France; and one of her savants has, by the aid of statistics, placed the subject in a strong, clear light. "In a paper read by M. Bertillon before the Academy of Medicine of Paris, the author—using as evidence the statistics of France, Holland, and Belgium—strongly maintained the healthful influence of conjugal association as compared with that of celibacy. The figures show that, between the ages of 20 and 35 years, 1000 married men furnish 6 deaths; 1000 bachelors, 10 deaths; and 1000 widowers, 22 deaths. From 30 to 35 years of age, the same classes, respectively, furnish 7.11 and $17\frac{1}{2}$ deaths. From 35 to 40 years of age, the mortality is $7\frac{1}{2}$, 13, and $17\frac{1}{2}$ per 1000 respectively. And so on, in a series of tables for all ages, the married man has greater longevity than the single man. The same advantage of the married

state obtains in the case of females, though up to the age of 30 the difference is not so apparent as in the other sex. From 30 to 35 the mortality is 11 per 1000 for single women, and only 9 per 1000 for married women, and this difference increases up to the age of 55. Thus from 50 to 55 years of age, 1000 wives furnish only 15 or 16 deaths, while as many single women or widows furnish 26 or 27. This advantage remains very notable beyond that age, diminishing but little. In France, however, under 25, and in Paris, under 20 years of age, marriage is far from favorable, but even injurious, as also in the case of males. The mortality of unmarried girls of from 15 to 20 is 7.53 per 1000; the mortality of wives of the same age being 11.86. The mortality of girls from 20 to 25 is 8.32; of wives of the same age, 9.92.*"

Moral, or more properly psychical, changes through the influence of love are not less pronounced than physical. They are observable in both sexes, although in unequal proportion, for the probable reason that the average extremes of character in woman are less marked. Her position in society protects her from many of the perturbing influences that act badly upon men. Still, they may be observed. The most consummate flirt I ever knew makes the man she ultimately wedded a most faithful and dutiful spouse. Another woman of similar antecedents married, and, giving over all thought of further conquests, became an excellent wife and a noble woman. A third lived miserably with her first husband, but happily with the second.

That the twain were designed to be mutually help-

* N. Y. Daily Tribune, July 4, 1872.

ful and a blessing to each other is too evident for serious argument. One is the complement of the other, and neither is complete separable from the other. It must be admitted, I think, that the best qualities of either are seldom developed without the mutual assistance and co-operation of the other. Nowhere in nature can be found such surprising manifestations of divine order and wisdom as is to be observed in the reciprocal relation of the sexes to each other!

Such is the mutual influence of the conjugal relation, and some of its hallowed consequences upon the individual when cemented and consecrated by love. An association of individuals so full of consecrating influences, *under propitious conditions*, becomes a union for the engendering and propagation of every species of vice, misery, and degradation, when formed in disregard of connubial laws, or perpetuated in defiance of their injunction. "Nowhere else," says Mr. Alger, "has knowledge such free scope, have the inducements for esteem or contempt such unhampered range, as in this relation. The inmost secrets of the parties are always exposed to revelation or to betrayal. Hypocrisy and deception are reduced to the narrowest limits. Accordingly, both the most absolute antagonism and misery, and the most absolute sympathy and happiness, are known in the conjugal union."* The carnally minded when mis-mated become more sensual; the vicious and morbid impulses of the heart receive fresh provocation and impetus; and all the higher elements of thought and feeling, of trust and love, degenerate into

* The Friendships of Women, p. 84.

hatred and lust. The endless clashing of personal and opposing interests, impulses, tastes, and the irritations and mutual recriminations that are continually engendered, augment the various elements of discord and dissension that may have been latent before, and breed manifold miseries, necessarily ending sooner or later in the spiritual death of the parties.

I knew a young man of pious parentage and training, who grew up to manhood with the purest speech and habit, and who never uttered a foul word nor committed a mean act until frenzied by discordant wedlock, and its sequence, intemperance. Another, of equal virtue and promise, married uncongenially, and disheartened, disappointed, and depressed, also sought oblivion from domestic dissension in the intoxicating cup. Many others, of like promise and worth, some of whom I knew intimately in my youth, and others whose acquaintance has been formed in professional life, have, from similar causes, gone the same unhappy way to miserable ends: others again, who, unable to maintain their integrity and self-respect and that of the family in an ill-assorted union, have sought diversion in absence or travel, or have interested themselves in business, or science, or literature, and thus secured immunity from the evils incident to hopes disappointed. Most fortunate, surely, are those who are able thus to flank grave misfortunes, and resolutely maintain the ascendancy of virtue in their daily walk and life. More often the unhappily married cling to each other under the pressure of a misguided public sentiment, and indulge in ceaseless wrangles and petty persecutions, mutually enfeebling and demoralizing; ending not unfrequently, as the daily records of events too often

show, in the perpetration of the most wanton and criminal acts against each other, and the order and peace of society.

The influence of marriage upon the progeny is even more potent for weal or woe than upon the married themselves. Gail Hamilton most forcibly and truly says: "To give life to a sentient being without being able to make provision to turn life to the best account,—to give life, careless whether it will be bale or boon to its recipient,—is the sin of sins. Every other sin mars what it finds; this makes what it mars."* Children are the offspring of their parents in more than a figurative sense. They are the literal *products* of their progenitors immediate and remote. The mental and physical conditions of the parents are bred in the bodies and brains of their progeny. Nor is this all: children are endowed and vitally influenced by the *peculiar circumstances* and normal or abnormal activities which are most dominant in their parents at the time of conception. Nothing is more absurdly common in the medical profession than the query whether this or that peculiarity is propagable. It is time such questions ceased to puzzle the brains of medical savants. It is undeniable that every cell and fibre of every organ and tissue, brain and nerve, with every peculiar property, mental and physical, possessed by the creature, was received by him through no prehensile act of his own, but directly from nature through the organizing influences of its parents' organization. There is, then, no peculiarity, whether mental or physical, normal or abnormal, that is not transmissible; but the most

* Woman's Wrongs, p. 199.

strongly characteristic traits of parents are more often the ones more strongly impressed upon the progeny, and for that reason become the more prominent objects of observation and study. Mr. George Combe, for example, mentions a man of superior talents, who indulged in wild and mischievous revelry at the time of his marriage, and who "congratulated himself on his subsequent domestication and moral improvement. His eldest son, born in his riotous days, notwithstanding a strictly moral education, turned out a personification of the father's actual condition at that time."*

The virtues and vices of parents thus live again in the lives of their offspring. Children not only inherit the wisdom and follies, vices and virtues, diseases and derangements, but also the physical and mental characteristics most prominent, as I have said, at the time of conception. The young being, like the sensitive glass in the camera, faithfully transcribes and reproduces all the impressions it receives from its parents. A German writer, therefore, wisely observes,† that "when a woman is likely to become a mother, she ought to be doubly careful of her temper; and, in particular, to indulge no ideas that are not cheerful, and no sentiments that are not kind. Such is the connection between mind and body, that the features of the face are moulded commonly into an expression of the internal disposition; and is it not natural to think that an infant, before it is born, may be affected by the temper of its mother?"

Nothing is more fully established in physiology

* Constitution of Man, p. 184.

† Ibid., from Margravine's Memoirs, vol. ii. chap. viii.

than the fact of hereditary transmission of the various qualities and peculiar idiosyncrasies, abnormal or otherwise, of both mother and father, to the offspring. Works on physiology are replete with such facts; and physiologists universally agree not only upon the credibility of the facts, but also upon the laws through which they occur. "This view," says the learned Dr. Carpenter,* "must be extended to that remarkable hereditary transmission of psychical character, which presents itself under circumstances that entirely forbid our attributing it to any agency that can operate subsequently to birth, and which it would seem impossible to account for on any other hypothesis than that the formative capacity of the germ determines the subsequent development of the brain, as of other parts of the body, and (through this) its mode of activity in accordance with the influences under which that germ was first impregnated."

The eminent author of "*Researches into the Physical History of Mankind*," Dr. Pritchard, observes that "the opinion which formerly prevailed, and which has been entertained by some modern writers, among whom is Dr. Darwin, that at the period when organization commences in the ovum—that is, at, or soon after, the time of conception—the structure of the foetus is capable of undergoing modifications from impressions on the mind or senses of the parent, does not appear altogether so improbable. It is contradicted at least by no fact in physiology. It is an opinion of very ancient prevalence, and may be traced to so remote a period that its rise cannot be attributed to the specu-

* Carpenter's *Human Physiology*, p. 574, sec. 630.

lations of philosophers; and it is difficult to account for the origin of such a persuasion, unless we ascribe it to the facts which happen to be observed." Surely not. In this connection Mr. Combe relates a corroborative illustration that came under his personal observation, which, however, it is needless to repeat here, as all medical men and most intelligent lay people are fully cognizant of similar phenomena. Besides, there are few who will not recall the artifice practiced by Jacob* on his father-in-law — Laban's — cattle, by which he forestalled the color of the stock, showing that that worthy patriarch was well acquainted with the law of parental influence and of hereditary descent.

Dr. John Mason Good, the distinguished author and physician, says that "stupidity, like wit, is propagable; and hence we frequently see it run from one generation to another, and not unfrequently it forms a distinctive mark in the mental character of districts or nations,—in many cases, indeed, when they border closely on each other."† Apropos of stupidity being transmissible, the learned Haller, in his "Elements of Physiology," says: "We know a very remarkable instance of two noble females (women) who got husbands on account of their wealth, although they were nearly idiots, and from whom this mental defect has extended for a century into several families, so that some of all their descendants still continue idiots in the fourth and even in the fifth generation.

Moral perversity is transmitted to the offspring. The proximate causes of deceitfulness, hatred, pre-

* Genesis xxx.

† Study of Medicine, vol. ii. p. 217, gen. iv., spec. 1, *Moria imbecillis*.

varications, jealousy, ill-temper, and all the various forms of nervous irritability and of mental derangements, reappear in the character of the innocent progeny. A family came under my personal observation, the mother of which was addicted to opium-eating, a habit she had for years carefully and successfully concealed from her family and friends. The children born during this time, of which there were several, are nearly all most adroit liars! The most discreet religious training and education wholly failed to eradicate the unhappy vice. George Combe quotes Esquirol, the celebrated French physician and author, and whom I have already quoted in these pages, who states that "many children whose existence dated from periods when the horrors of the French Revolution were at their height, turned out subsequently to be weak, nervous, and irritable in mind, extremely susceptible of impressions, and liable to be thrown by the least extraordinary excitement into absolute insanity."*

As a noted example of the transmission of *fear* from temporary mental impressions, Mr. Combe relates the circumstances of the murder of David Rizzio by armed nobles, in the presence of Mary, Queen of Scots, just previous to the birth of her son, afterwards King James the First of England. "The constitutional liability of this monarch to emotions of fear," says Combe, "is recorded as characteristic of his mind; and it is mentioned that he even started involuntarily at the sight of a drawn sword." The well-known courage which distinguished all the other members of the Stuart family makes this exception the more noticeable.

* Constitution of Man, p. 180.

Courage is likewise transmissible. Napoleon Bonaparte furnishes a noted example. Scott relates that "it was in the middle of civil discord, fights, and skirmishes, that Charles Bonaparte married Lætitia Ramolini, one of the most beautiful young women of the island, and possessed of a great deal of firmness of character. She partook of the dangers of her husband during the years of civil war, and is said to have accompanied him on horseback on some military expeditions, or perhaps hasty flights, shortly before her being delivered of the future emperor."*

The propensity to steal is also hereditary. Several instances have come to my knowledge in the course of my professional experience; in one case a clergyman, whose two sons grew up expert thieves, and were finally convicted of forgery and robbery, and sent to the penitentiary. They inherited the peculiar misfortune apparently from the maternal ancestry; although the father also had an immense development of the animal brain, the exercise of which was probably checked by the restraining influence of favorable circumstances. Another unhappy instance of this propensity existed in a young daughter, who received it from the paternal ancestor. In spite of the most exemplary training and considerate supply of every needed luxury, the vice could neither be eradicated nor repressed.

Mr. Combe says that children frequently inherit the perverse eccentricities of both parents in an aggravated degree; indeed, are very likely to do so when such parents are discordantly mated.† Numer-

* Life of Napoleon Bonaparte, vol. iii, p. 6.

† See Constitution of Man, p. 196 *et seq.*

ous instances of the kind have come under my own observation, in which I could discover most clearly in the same child the combative, overbearing spirit of the father, combined with the acquiring, deceptive traits of the mother. That author relates similar observations of his own, in which the family became a theatre of war and threatened bloodshed, or wild debauchery and crime; the unfortunate progeny inheriting "the large animal development of the one with the defective moral development of the other; and, in this way, was inferior to both." Such marriages people our prisons and penitentiaries, almshouses, asylums, and other charitable and criminal institutions.

Now, in order to fulfil all the conditions of proper parentage, something more is required than the moral and intellectual fitness of the parents, as desirable as this is. Mr. Combe's very able writings on the subject rest there; as if to go further would be unwarrantable speculation. But who does not know that the twain may mutually possess the very highest excellence of moral and intellectual development, and the added charms of physical and mental grace and beauty, and yet lack the essential element of conjugality? Such people may surely be friends; but to form the higher and holier relation of husband and wife, another element is indispensable, which it is most difficult to define, but which may be characterized, in the absence of better terms, as mutual fitness,—temperamental adaptation,—love. The ancient Spartans, whom we are pleased to style pagans, appear to have been more conversant with this subject than their enlightened descendants. That their progeny might not be generated under inferior conditions and

their race suffer degeneration, they used every possible precaution against matrimonial alliances otherwise than on the true basis of conjugal affinity, or constitutional fitness on the part of the parents for each other. A living illustration will elucidate my meaning: a lady and gentleman of rare culture and intellectual acquirements, with the added quality of mutual esteem, formed an acquaintance, and through the persuasion of friends, who *knew it would make such a good match*, and against the fine intuitive judgment of the lady herself, finally married. Mutual and irreconcilable differences of feeling, opinion, and taste soon developed, which ended in chronic and ineradicable dislike. Children came to them and added fuel to the kindling flame of domestic dissension. Nothing kept the family together but the fancied welfare of the children and the fear of incurring the censure of the public. The lady herself, I am assured, has long preferred death to the degradations of the "hated union." Similar instances may be observed everywhere among civilized people.

Now, children may possibly be born in the possession of many good elements and qualities of character, under the mechanical adjustments of intellectual and moral qualities in their parents; but *good*, never. Congenial wedlock is the indispensable condition of a pure, high-toned progeny. Grapes are not gathered from thorns, nor figs from thistles. The Constantines, Caligulas, Neros, Alexanders, Georgies, Napoleons, Burrs, Tannys, Byrons, and the like, may be produced in indifferent conjugal relations. But the minds that move the world and bless mankind, the Solons, Platos, Galileos, Gôtamas, Jesus's, Newtons, Shakspeares, Melanchthons, Wesleys, Channings, Scotts,

Austens, Lincolns, Greeleys, etc., require wedlock of a higher, nobler order. High moral and spiritual brains and minds are bred under no mean conditions—are not chance productions in nature. The superior excellences of human character are not accidental phenomena,—miraculous displays of divine wisdom; but rest on the substantial basis of organic law, within the comprehension of everybody. If this divinest of all human relations were to be left to chance, and maintained by outward force, or influenced by motives of interest or ambition, I would much prefer, were it possible to choose, to take the chance of fine, moral endowment outside the confines of a merely formal wedlock, than run the risk of having the manifold miseries, so often engendered in unhappy marriage, entailed upon me. It would be a very unhappy alternative, to be sure; but personal character of a high order would more than compensate one for the conventional odium of bastardy.

Nothing in nature can be more certain than that high-toned, well-endowed, happily-united families of children are the legitimate offsprings of happy marriage only, nor that the wretched, ill-natured, immoral, and discordant children which curse society are the equally legitimate creatures of unhappy marriage alone. My observations have been careful and studious, and not at all limited in their sphere, extending over a period of twenty-five years, and I know of no single exception to the statement. Mr. Combe's observation accords entirely with that of my own, so far as it goes. He says: "On the other hand, I am not acquainted with a single instance in which the moral and intellectual organs predominated in both

father and mother, and when external circumstances permitted their general activity, in which the whole children did not partake of a moral and intellectual character, differing slightly in degrees of excellence one from another, but all presenting the decided predominance of the human over the animal faculties."* Moreover, while no different result could follow the natural and inevitable operation of cause and effect, still, if such parties lack in their relationship the higher element of true love, their offspring will necessarily suffer in the nobler qualities of human character,—generally the social and spiritual. My own observations afford many confirmatory examples.

A family of my acquaintance, the father and mother of which are both moral and intellectual people, but who, mutually disliking each other, live in ceaseless contentions and mutual distrust, and have done so ever since the birth of their first child. All the children are most unhappy and discontented among themselves at home, although pleasant and contented among other children away, or alone separately. They are well-developed, fine-looking, quick-witted, and intellectual; inheriting these qualities largely from both parents. Their moral characters would certainly not disprove the position of Mr. Combe. Nor are they vicious, ungenerous, sour, or mean. Yet they are mentally wanting. The fundamental defect in their mental organization is *respect and affection*. The mutual goodwill, regard, and esteem, so indispensable to the happiness, or existence even, of home, seems wanting. The impulse of each is to *get away from home and each*

* Constitution of Man, p. 197.

other; returning only to eat and sleep; and as rarely for that purpose as consistent with convenience or necessity. Some exception to these statements should be taken in favor of the eldest child, which, generated under conditions more propitious, exhibits far more gentleness and affection, and correspondingly less waywardness and irritability. But the others inherit from their unhappy parents a large share of the combative, unsocial, and selfish passions which are so frequently exercised in their private intercourse.*

Several similar cases have come to my knowledge, where the children,—generally a large number, for such unions are usually prolific, the sexual being the chief and only admissible converse between them,—as soon as large enough to care for themselves, leave home and kindred to return seldom as possible, or never. Like chickens, they are driven from the parental roof and care as soon as they become self-dependent and able to “scratch” for themselves. Nor are they averse to going. Such children know little of the sacred associations of kindred and home! The moral advantages of home and social life do not exist for *them*!

Mr. Combe, in his excellent volume on the “Constitution of Man,” before quoted, relates the following: “A man aged about fifty, possessed a brain in which the animal, moral, and perceptive organs were all large, but the reflecting small. He was pious, but destitute of education; he married an unhealthy young woman, deficient in moral development, but of considerable force of character; and several children

* Referred to by permission.

were born. The father and mother were far from being happy; and when the children attained to eighteen or twenty years of age, they were adepts in every species of immorality and profligacy. They picked their father's pockets, stole his goods, and got them sold back to him, by accomplices, for money, which was spent in betting, cock-fighting, drinking, and low debauchery. The father was heavily grieved; but knowing only two resources, he beat the children severely as long as he was able, and prayed for them. His own words were, that, '*if after that*, it pleased the Lord to make vessels of wrath of them, the Lord's will must just be done!' I make this last observation," continues Mr. Combe, "not in jest, but in great seriousness. It was impossible not to pity the unhappy father; yet, who that sees the institutions of the Creator to be in themselves wise, but in this instance to have been directly violated, will not acknowledge that the bitter pangs of the poor old man were the consequences of his own ignorance; and that it was an erroneous view of the divine administration which led him to overlook his own mistakes, and to attribute to the Almighty the purpose of making vessels of wrath of his children, as the only explanation which he could give of their wicked dispositions? Who that sees the cause of his misery can fail to lament that his piety was not enlightened by philosophy, and directed to obedience, in the first instance, to the organic laws of the Creator, as one of the prescribed conditions, without observance of which he had no title to expect a blessing upon his offspring?"*

* Constitution of Man, pp. 195-6.

The pernicious consequences on the offspring arising from disregard of connubial laws, in forming the conjugal union, as illustrated in all these instances, the parallel of which may be found in abundance in society everywhere, are not, unhappily, confined to the period of conception, at which time the foundations of the constitution of the child, mental and physical, are laid. Such consequences are particularly operative during gestation, when the mother is abnormally sensitive to all impressions of whatever nature. Every morbid impression on her mentality is likely to be faithfully recorded on her child. The passions, at such times, are peculiarly sensitive, and easily aroused, and unless the moral element largely predominate in her character, assume unusual sway over her conduct. Hence the frequent wrangles, jealousies, disputes, animosities, etc., in which the ill-assorted so often indulge at that time, to the lasting injury of the prospective child. It is thus that the innocent becomes a victim, and receives its first baptism in sin and sorrow. Its nature, so wisely plastic, and receptive of the moral graces and excellences thus early, becomes the recipient of the elements of nervous irritability, vice, and crime. Such is being, literally, "conceived in sin and born in iniquity."

There are numerous other sources of demoralization to the progeny of mismated parents, which, from personal observation, I know to be wide-spread and damning. I cannot forbear to allude to one in passing. It not unfrequently happens that such matches are influenced altogether by a physical fancy,—a bodily attraction. Youthful, immature, without judgment, overflowing with vital ardor and strong impulses,

wanting in self-possession and moral restraint, men and women fall an easy prey to each other's physical attractions. "Such," says Dr. Johnson, "is the common process of marriage,—a youth and maiden meeting by chance, or brought together by artifice, exchange glances, reciprocate civilities, go home and dream of one another. Having little to divert attention, or diversify thought, they find themselves uneasy when they are apart, and therefore conclude that they shall be happy together. They marry, and discover what nothing but voluntary blindness before had concealed; they wear out life in altercations, and charge nature with cruelty."* The nobler impulses and sentiments of parties thus wrongfully brought together, and compelled to accept each other's society, having little moral strength at first to sustain them, sooner or later lose even what they had, leaving nothing behind but a purely animal attachment. This usually remains unimpaired, more often increases in force; and the abuses which grow out of it correspondingly augment. Under such circumstances, the sacred function of gestation is rarely respected; sexual passion intrudes upon the finer instincts and feelings of the wife, and she is forced to submit to conduct which, under the circumstances, cannot but awaken feelings toward her lord of repugnance or of deep disgust. The extent to which this abuse is carried in civilized society is most lamentable. It is a flagrant outrage upon maternity and the rights of the unborn, and inflicts grievous wrongs on the health of the mother, and the constitution and mental traits of her child.

* *Rasselas*, chap. xxix., quoted by Combe.

How could such excesses, at such times, do otherwise than aggravate the penalties of a relation already impure and discordant, when the heightened sensibilities of her who is a mother, or about to become such, is considered? A due regard for the life and moral well-being of the offspring, should adjure the husband and father to impose no act on the wife likely to awaken or develop in her a thought not just, or a sentiment not pure and kind; and what is true in respect to the period of gestation applies with almost equal force and pertinency to the period of lactation. It is well known that during the exercise of the latter function, also, the mother is peculiarly sensitive to nervous disturbances, and that violent emotions poison her milk, and endanger the moral and physical health of the infant.

Moreover, as a general rule, husbands and wives thus constituted have extreme aversion to children; and if they are born to them at all, it is against their will and purpose. They did not marry to discharge the sacred offices of parentage; and no effort is spared but the manly one, to circumvent it. No artifice is left untried. Inordinate doses of poisonous emmenagogues are remorselessly swallowed. The art of the surgeon is invoked; and if the little creature, which has been so thoughtlessly endowed with a living soul, survives these assaults, it is often intensely disliked. It is, in fact, an unwelcome child! In three instances during my professional life I have attended women in confinement who were anxious that their babe should not be born alive! Two of the number actually expressed a desire to "strangle it!"—a most melancholy experience, surely. Such wives have generally to learn to love their offspring.

Now, in view of such facts, is it any wonder that children born out of wedlock are frequently superior to many who are born in it? Not at all. Bastards, while they are conceived in sin, are generally bred and reared in virtue; while their more respectable brothers are too often conceived in sin, with the added disability of being born in iniquity also.*

These anomalies in domestic life—if such they may be called—are, of course, naturally confined to the lower grades of marriage,—to the *civil* marriage,—what Milton has very pertinently designated “an outside matrimony.” They are as far removed from the marital phenomena of pure, congenial wedlock, as are the antipodes. Love, in the latter relation, is more a sentiment, an inspiration, than an impulse. The sensual element, under its influence, attends upon maternity in the strictest chastity. The carnal has lapsed into the spiritual. Both parties to the bond look forward to parentage with the liveliest interest and solicitude; and their parental love, so early awakened, grows stronger as time advances and brings its precious object nearer and nearer the complete realization. The wife, moreover, is never dearer and lovelier in the eye of her husband. With hopeful trust, he guards her from every possible harm and grievance; waits upon her instincts; cherishes her respect and esteem; fosters her finer sentiments; and protects her from every influence unfriendly to her and the life and moral well-being of her child.

The relation of the sexes, therefore, is a subject of

* In Scotland nearly 10 per cent. of the total number of births are illegitimate. See Note at the end of the chapter.

profound importance to the welfare of mankind; and the facts herewith presented would appear to justify its connection with mental hygiene. In forestalling the quality of the bud, the character of the blossom is controlled. The remedy for the evils incident thereto, and the means of securing so desirable an object, are more difficult of application than of suggestion.

"The cure of false theology is mother wit," says Emerson.* The remedy for error of whatever class is knowledge; for man obeys his highest perceptions of truth, if for no other reason, because it pays to do so. Many well-meaning moralists, in view of the miseries matrimonial, which appear to be on the increase in this country, are clamoring at the door of the legislatures, and in the ear of the public, for more stringent laws to protect the sanctity of the marital relation. These people associate the increasing frequency of divorce with the domestic violence and crime, which are so alarmingly prevalent, as sustaining the relation of cause and sequence. Such a conclusion seems unwarrantable from the evidence, except, indeed, it be in the inverse order to that claimed by them; for it were easy to show, by local statistics of crime, that crimes and immoralities prevail more largely in communities and commonwealths where divorces are least numerous and most difficult to procure. Be that as it may, I am always suspicious of the logic of him who can conceive of no more effective means of correcting the evils of his day and race, than the passage of legislative enactments. It evinces too little faith in God and the human constitution.

* *Conduct of Life*, p. 187.

The day for the exercise of such logic is past. The attempt to legislate food into a man's stomach would be quite as rational as to legislate morals into his heart; to add to his stature, as to improve his manners. Making laws to do this, or to effect that, so far as morals are concerned, has long since been abandoned by the common sense of mankind. Why, there is no dearth of laws! God, the Father and Author of all, provided an adequate supply of them at the beginning! It is incumbent on man to know and to obey them. To know, rightly to appreciate, them is almost synonymous to their practical obedience, so intimate is the relation of knowledge and obligation. The truth has become almost self-evident, that ignorance and crime bear to each other the relation of cause and consequence.

The primary remedy for these evils, then, is knowledge—knowledge of ourselves. Legislative edicts are quite secondary. Unless I have read history to no purpose, it is full of instruction bearing upon this subject. Take, for example, the Roman republic. There was a time when her domestic manners, if Plutarch and others are to be credited, were the pride of her people and an example to the whole world. For several centuries, but one divorce was known to her courts, and the procurer of that, one Camillus Spurius, was ever after execrated in consequence. Well, Rome became corrupt by the usual causes and consequences, viz., an influx of ignorant people; worldly prosperity and affluence; avarice, pride and selfishness, and their usual concomitants—vice. Society fell from the dizzy height of unparalleled perfection and splendor to the direst depths of extravagance and corruption. The women were profligate

and licentious; the men kept mistresses and avoided matrimony. The few who embraced marriage did not respect the institution, and abandoned it at pleasure. Divorces, of course, were common, and for divers causes. During the empire, and even in the time of Julius Cæsar, legislative attempts were essayed to change the course of domestic events, and stem the tide of evil influences which had set in and was undermining its very life. The government actually put a premium upon marriage as an inducement to parties to embrace it and keep its obligations. Rewards were offered to women who would bear children, hoping thereby to break up the system of concubinage which prevailed so largely, and promote pure, sincere marriage. Fines, and various other disabilities were imposed on women who had arrived at a certain age without bearing children. But all was of no avail. Later, under the Christian emperor, Constantine, society had grown so much worse that heavy fines were imposed on the unmarried of both sexes. The laws regulating divorce, which previously were very lax, now, under the teachings of the New Testament, were nearly as stringent as they are at this day in the Romish church. But neither precepts nor penalties produced the desired effect. Rome sunk into merited ruin and contempt, in spite of the wisest man-made laws that could be devised for her government and regeneration. She passed away,—died out. Centuries have now slept upon her ruins; but the long dark ages that followed her decline have left most prominent this lesson of her fall.*

* See on this subject Mosheim's Ecclesiastical History, and Gibbon's "Decline and Fall."

Now, nature's laws flow direct from God. They are the latest revelation of his will and purpose to him who can read them. They are in the highest degree authoritative, and cannot be set aside or annulled by any statute or canon of church or state. Ignorance and misapprehension may pervert and prevent the fulfillment of their legitimate purpose; but they are still operative, as evinced in the manifold penalties (evils) that follow upon their infringement. Another illustration of this truth is furnished in the historical struggles of the church with celibacy.

The fourth council of Carthage, which convened about A.D. 400, definitively decreed the celibacy of priests, deacons, and bishops in the Christian church. A few years later, Pope Innocent I. gave orders to depose such priests as had been guilty of marriage since their ordination. And the above-named council annulled the marriage of such priests and bishops as had contracted that relation previous to the decree. Nature's laws permitting marriage to all were, indeed, contravened in these decrees. "The hope of acquiring heaven by virginity and mortification," says Keightley, "was not confined to the male sex; woman, with the enthusiasm and the devotional tendency peculiar to her, rushed eagerly toward the crown of glory. Nunneries became numerous, and were thronged with inmates."* Ecclesiastical ordinances seemed for a time to have supplemented the order of nature and the law of God. What could be more natural, after all, under the strong impetus of religious enthusiasm and superstition? If celibacy were an indispensable re-

* Keightley's Hist. Rom. Emp., chap. vi.

quisite of spirituality in the priesthood, it was equally indispensable to that excellence in lay-people. This conclusion was a natural, inevitable corollary. But how was that anomalous condition of life to be maintained in good faith, unless men and women were removed from the wiles and temptations of each other, and the depraved influences of the world? The consequences of this unnatural decree soon developed themselves in the establishment and peopling of convents and monasteries, in which were reproduced the vices of the outside world in their most revolting forms; vices which make one blush to read; vices of too shameful a character to transcribe upon paper. Nor was any other result to be rationally expected. "The number," says Mosheim, "of immoral and unworthy Christians began so to increase, that the examples of real piety and virtue became extremely rare."* And Keightley says that nature "not unfrequently asserted her rights; and the complaints and admonitions of the most celebrated fathers assure us that the unnatural state of vowed celibacy was productive of the same evils and scandals in ancient as in modern times."† And again, Mosheim observes: "When we cast an eye toward the lives and morals of Christians at this time (fourth century), we find, as formerly, a mixture of good and evil; some eminent for piety, others infamous for their crimes. The number, however, of immoral Christians began so to increase, that the examples of real piety and virtue became ex-

* Mosheim's *Ecc. Hist.*, Cent. 4, part ii. chap. iii. p. 116.

† *Hist. Rom. Empire*. See Lecky's *Hist. European Morals*, and also Lea's able *Hist. Sacerdotal Celibacy and the Nunneries of the Middle Ages*.

tremely rare. When the terrors of persecution were totally dispelled; when the church, secured from the efforts of its enemies, enjoyed the sweets of prosperity and peace; when the major part of the bishops exhibited to their flock the contagious example of arrogance, luxury, effeminacy, animosity, and strife, with other vices too numerous to mention; when the inferior rulers and doctors of the church fell into a slothful and opprobrious negligence of the duties of their respective stations, and employed in vain wrangling and idle disputes that zeal and attention which were due to the culture of piety and to the instruction of their people; and when (to complete the enormity of this horrid detail) multitudes were drawn into the profession of Christianity, not by the power of conviction and argument, but by the prospect of gain or the fear of punishment; then it was indeed no wonder that the church was contaminated with shoals of profligate Christians, and that the virtuous few were, in a manner, oppressed and overwhelmed by the superior number of the wicked and licentious."*

Nothing could be more praiseworthy than the purpose and spirit of these celibatic decrees, so unwise and mischievous in practical results. They were, however, acts of supererogation, and presupposed the possession by man of wisdom superior to that of Him who disposes of all mundane events. How much more consistent and rational were the laws of the ancient pagans, such, for example, as those introduced by Lycurgus and Solon, which simply conformed to nature and left the results with God! And how much

* Mosheim's *Eccl. History*, p. 116, chap. iii.

more beneficent were those results ! Instance Sparta, where the vice of adultery was unknown. Instance also pagan Rome, where divorce, for a period of five hundred and fourteen years, was unknown.

If, therefore, wisdom and chastity cannot be legislated into a people, are their follies and vices to go unrestrained and uncontrolled ? By no means. The causes of all these wayward appetencies must be removed by wholesome discipline, physiological enlightenment, and appropriate legislation. It is obligatory on society to do this work for the individual. The *conditions* from which the various forms of abnormal tendencies, desires, and habits flow, demand correction. Precepts should be inculcated and laws enacted to promote human culture in its broad significance ; and to regulate the forms, etc., of the domestic compact, social and other relations, conformable to the circumstances, nature, and requirements of man. Let the light of rational philosophy do this regenerating work, since all other philosophy has signally failed to do it.

The wise physician exhibits his skill more by anticipating the progressive and conserving forces of nature, in combating diseased manifestations, than in blindly attempting to cure that of the nature of which he often knows little or nothing. So, while moralists and formularists are disputing over the nature and origin of evil, and passing impracticable legislative edicts, the true philosopher seeks to diffuse a knowledge of the conditions of human life, that the real source and cause of physical and moral abnormalities may gradually dissipate,—vanish like the mists of early morning before the god of day.

Much may be learned on this subject from the laws and regulations of Lycurgus, one of Greece's ancient rulers, to whom I have already referred, and whose wisdom, although a pagan's, established the prosperity of ancient Sparta. There was much in his system, of course, that would be absurd and out of place in the civilization of modern times; and much also in respect to the institution of marriage, and the proper training therefor, which modern society can ill afford to disregard. Under Lycurgus, Sparta grew up from a state of indigence and non-entity to one of unrivaled prosperity in virtue, industry, wealth, courage, and honorable fame; in brief, in most of the elements that ornament and exalt a people.

Lycurgus seems to have correctly apprehended the laws of the physical economy, as well as those antenatal influences essential to a healthy progeny. He inculcated simplicity of diet, of habits, and of dress, and strictly abjured the refinements and luxuries which at that time were demoralizing Athens, as tending to induce effeminacy. All sorts of games were introduced involving the exhibition of muscular energy and strength. In these exercises the women were especially invited and encouraged to take part; as it was deemed a most important element of their education and fitness, in order to properly fulfill the function of maternity, that they should be robust in body and mind. How unwise, said this lawgiver, for people to take such solicitude about the physical development and breeding of stock, and leave to chance what is of so much greater importance,—the breeding and training of healthy children! Mothers were in this manner especially trained for maternity; and the ultimate results on the

race were what might have been naturally anticipated. When a woman of another country said to Gorgo, the wife of Leonidas, that "you of Lacedæmon are the only women in the world that rule the men," she answered, "We are the only women that bring forth men!"* The sexes were educated together, and mutually engaged in all their social customs, games, and pastimes. Early marriages tended to enfeeble offspring, and were therefore discouraged. And for a similar reason marriage between parties of unequal rank and culture, and blood relations especially, was not permitted. Matrimony was enjoined upon all the able-bodied as a moral duty; and bachelors who refused to submit themselves to the marital yoke were objects of ridicule, disability, and fine. Nor was anything more than these negative inducements offered to candidates for marriage; but, on the contrary, all temptations likely to corrupt the institution, as bringing the sexes together through other motives than mental attraction and regard, such as dower, position, rank, etc., were carefully avoided. These measures were pre-eminently adapted, in their view, to promote congenial wedlock, and to secure the highest possible virtue in the family relation and society. Nor were they less wisely calculated to guarantee the physical and mental welfare of their progeny.

These people encouraged the growth of friendships between the sexes, with a view of promoting the moral and social virtues. Young men were cherished by the opposite sex as brothers. "Yet," says Plutarch,† "in Sparta it was a virtuous and modest affection, un-

* Plutarch's *Lives*, p. 51.† *Ibid.*, p. 53.

tinged with that sensuality which was so scandalous at Athens and other places." Nothing could be more free and simple than Spartan life and manners; and yet no people of any age have equaled them in modesty and chastity. Plutarch says that adultery was absolutely unknown to them. A stranger, on one occasion, asked Geradas, an ancient Spartan, "what punishment their law appointed for adulterers. He answered, 'My friend, there are no adulterers in our country.' The other replied, 'But what if there should be one?' 'Why, then,' said Geradas, 'he must forfeit a bull so large that he might drink of the Eurotas from the top of Mount Taygetus!' When the stranger expressed his surprise at this, and said, 'How can such a bull be found?' Geradas answered, with a smile, 'How can an adulterer be found in Sparta?'"*

It is a matter of no little surprise to find that the laws of reproduction, and the influence of a well-assorted marriage on the physical and moral development of children, were so well understood by the ancient Greeks! They did not, however, fully appreciate the divine relation of the sexes. To them marriage was instituted chiefly for the propagation of the species and the welfare of the state. Solon, nearly a century after Lycurgus, distinctly so declared.† The

* Plutarch's Lives, p. 52.

† Ibid., pp. 79, 80. Plutarch says that Solon "did not choose that marriages should be made with mercenary or venal views; but would have that union cemented by the endearment of children, and every other instance of love and friendship. Nay, Dionysius himself, when his mother desired to be married to a young Syracusan, told her, *He had indeed, by his tyranny, broken through the laws of his country, but he could not break those of nature by countenancing so disproportioned a match.* And surely such disorders

law of uses they clearly apprehended ; but of the true, abiding, and beneficent influence of the spiritual marriage on the individual, as an institution existing primarily *for his sake*, they seem to have had but a very feeble conception. In that respect, however, it may be remarked that the opinions of this ancient people appear to have been quite as far advanced, unhappily, as those of the majority of mankind of modern times.

Surely, with the wisdom of the ages and modern science to guide and instruct our minds, there should be no difficulty in solving the moral and physiological problems of marriage and its allied subjects, and in unfolding the relation which subsists between them and the morals of mankind. Institutions exist for man, not man for institutions ; and in proportion as they conform to his nature and highest interests, do they fulfill the end and purpose of Infinite Wisdom. In proportion, moreover, as this truth is recognized, shall man have less reverence for institutions, and more reverence for the principles at the back of them. Then will he be emancipated from mental thralldom, and the tyranny of arbitrary edicts, political and ecclesiastical, and more clearly apprehend his relations to his fellow, to society, and to the Infinite.

should not be tolerated in any state, nor such matches, where there is no equality of years, or inducements of love, or probability that the end of marriage will be answered. So that to an old man who marries a young woman, some prudent magistrate or lawyer might express himself in the words addressed to Philoctetes :

‘ Poor soul ! how fit art thou to marry ! ’ ”

Plutarch's Lives, art. Solon.

NOTE ON ILLEGITIMACY.

In Europe illegitimate children are far more numerous than in America. In Scotland, although the marriage ceremony required by law is so simple that one wonders how such an incident as bastardy could occur under its operation, the percentage of illegitimate births amounts to about nine per cent. of the total number. In some of her counties it is as high as fifteen per cent. of the total number of births, as the following table, from the registrar-general's report for the quarter ending June 30, 1869, shows:

*Proportion of Illegitimate in every Hundred Births in the Divisions and Counties of Scotland during the Quarter ending June 30, 1869.**

DIVISIONS.	Percent. of Illegitimate.	COUNTIES.	Percent. of Illegitimate.	COUNTIES.	Percent. of Illegitimate.	COUNTIES.	Percent. of Illegitimate.
Scotland . .	9.2	Orkney .	6.3	Forfar . .	12.2	Lanark . .	7.3
Northern . .	8.0	Shetland .	3.7	Perth . .	10.4	Linlithgow .	8.5
North-Western	7.8	Caithness .	10.4	Fife . .	8.1	Edinburgh .	8.4
North-Eastern	13.0	Sutherland	9.7	Kinross .	6.2	Haddington .	7.5
East-Midland .	10.4	Ross and }	4.3	Clack- }	7.0	Berwick . .	10.6
West-Midland .	7.0	Cromarty }		mannan }		Peebles . .	10.2
South-Western	8.0	Inverness .	10.9	Stirling .	6.5	Selkirk . .	9.0
South-Eastern	8.5	Nairn . .	13.5	Dumbarton	6.7	Roxburgh .	10.9
Southern . .	1.39	Elgin . .	13.5	Argyll . .	8.2	Dumfries .	14.7
		Banff . .	11.9	Bute . .	6.6	Kirkcud- bright . .	15.1
		Aberdeen .	13.2	Renfrew .	7.1	Wigtown .	15.3
		Kincardine	12.4	Ayr . .	9.0		

* Jour. Stat. Society, vol. xxxii. London, 1869.

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